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Investigating Equity : An Evaluation of the Relationship of the NCAA's APR Metric on Similarly Resourced Historically Black and Predominantly White NCAA Division-I Colleges and Universities

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INVESTIGATING EQUITY: AN EVALUATION OF THE RELATIONSHIP OF THE NCAA's APR METRIC ON SIMILARLY RESOURCED HISTORICALLY BLACK AND PREDOMINANTLY WHITE NCAA DIVISION-I COLLEGES AND UNIVERSITIES

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Abstract

In 2003, the National Collegiate Athletic Association (NCAA) launched the Academic Performance Program (APP) as a means of measuring institutional accountability of academic outcomes for Division I member institutions. One of the two metrics used to define academic effectiveness is the Academic Progress Rate (APR) metric, immediately drew considerable criticism for its penalty structure, which disproportionately impacted colleges and universities with lesser resources. As time progressed, these penalties almost exclusively were distributed among the poorest institutions in Division I, which is heavily represented by the nation's most prominent Historically Black Colleges and Universities. These penalty trends begged the question of whether resource level, or race, was significant in predicting APR penalties.

Using Harris' Critical Race Theory (2012) and Pfeffer and Salancik's Resource Dependence Theory (1978) as a guiding theoretical framework, and publicly available data from the Integrated Postsecondary Education Data System (IPEDS), the Knight Commission Athletic & Academic Spending Database for NCAA Division I, and the Academic Progress Rate (APR) Database, I sought to evaluate whether institutional-level variables associated with resource level, student academic profile, student financial aid, institutional mission, admissions characteristics, and race were significant predictors of APR penalties.

The outcomes of a logistic regression identified HBCU (institution type), Pell percentage, and ACT scores as significant predictors of APR penalty. Resource level was not determined to be a significant predictor of APR penalty.

Key Words: NCAA, Academic-Progress-Rate, HBCU, College-Athletics, Student-Athletes, Division-I, NCAA-APR, Academic-Performance-Program, NCAA-APP

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Dedication

For my parents

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Chapter 1 – Introduction

Background

Every year, millions of sports fans across the United States invest their time, money, and their emotions supporting collegiate athletic programs. Whether supporting their alma maters, family legacies, or local or state colleges or universities, fans will invest large portions of their evenings and weekends, as well as falls, winters, and springs, glued to their seats – or televisions – hoping that it is their team's year for success and glory. This obsession with college athletics is uniquely American, and has encapsulated fans, families, and alumni bases for almost a century and a half since the first intercollegiate football game between Rutgers and Princeton in 1869 (Lewis, 1970). What once started out as a friendly competition to determine bragging rights between two local schools has evolved into an annual multi-billion dollar industry (Lavigne, 2016).

At the center of this cultural phenomenon is the National Collegiate Athletic Association (NCAA). The NCAA is a non-profit organization which serves as the governing body which oversees the overwhelming majority of collegiate athletics in the United States. Its membership is represented by over 1,200 schools and 460,000 student-athletes (NCAA, 2014e, NCAA, 2016c). Originally founded in 1906 by President Theodore Roosevelt, the NCAA was created as a means to provide safety for the participants of football, a sport which had grown increasingly violent over the last two decades of the 19th century (Kirkpatrick, 2012; Oriard, 2012). Today the NCAA finds itself acting in a similar capacity in regards to protecting the wellbeing of the student-athletes who constitute their membership. Along with oversight of 89 championships in 23 sports for its membership schools (NCAA, 2014c), the NCAA implements legislation for "fair and safe competition" to protect the wellbeing of student-athletes (NCAA, 2016c). This

goal of protecting student-athlete wellbeing is becoming an increasingly challenging task for the NCAA. As the incentive to win is backed by larger sums of money, the temptation to put academic priorities on the back burner is happening on a grander scale. Institutions like North Carolina, whose academic prestige has made it a top research institution, was plagued by an academic scandal which took root in an academic department for nearly 20 years (Gurney, Lopiano, & Zimbalist, 2016). These scandals have plagued top institutions such as Syracuse, Florida, Florida State, Rutgers, Baylor, and Brigham Young, just to name a few. All of these scandals occurred in the era of the Academic Performance Program (APP) (post-2003), where pressures have mounted on schools to win on the athletic arena due to greater financial and social incentives to win (Gurney et al., 2016).

In recent decades as the world of collegiate athletics has become more of a corporate industry with salaries of top coaches in football and basketball approaching eight figures, and annual revenues for the top 25 wealthiest institutions each reaching over $100 million (USA Today, 2016). NCAA membership schools are still governed by a model centered on amateurism, despite the growth of intercollegiate sports into a multi-billion dollar industry (Lavigne, 2016). Competition under the NCAA is divided into three main divisions - Division I, II, and III. Division I is home to the largest and wealthiest schools and can provide athletic scholarships (with the exception of the Ivy League which does not). Division II is similar to Division I in that its members can provide athletic scholarships to students, though they usually have much smaller budgets compared to their Division I peers. Division II members also do not need to sponsor as many sports as Division I members. Lastly, Division III membership cannot provide athletic scholarships and there is a greater focus on the student-athlete experience (NCAA, 2014b).

Among the NCAA's core values, which inform its governance structure, are a commitment to a collegiate model of athletics, which highlights a balance of academic, social, and athletic commitments; an inclusive culture, which "fosters equitable participation for student-athletes" and respect for institutional autonomy and philosophical differences (NCAA, 2014f, para 6). The NCAA has used these guiding principles to regulate participation in college athletics through implementing policy, as to not undermine the academic missions of its membership institutions. The organization has done so largely through two types of academic policy: initial eligibility for athletic competition and institutional effectiveness of student-athletes' progressing towards a degree. Initial eligibility largely serves as a screening process to hold students to minimum academic standards to participate in college athletics. The NCAA has utilized these policies for over a half-century. The other type of academic policy relates to making sure that student-athletes are making satisfactory progress towards earning a college degree, which has been in existence for a little over 30 years. Though designed to align with its core values, these overall academic-related policy measures put in place by the NCAA to govern its membership have drawn significant scrutiny from scholars, NCAA watchdogs, athletic administrators, and student-athletes. These critics have raised issue with said policy which, they argue, has had a discriminatory, disproportionate, and disparate impact on certain groups, specifically Black males. Initial eligibility, specifically, has served as a means of lowering the bar at times so low, that it has set up students for failure in the collegiate classroom. This has occurred all while asking these same students to use their academic prowess to generate millions of dollars for their respective institutions. As a result, these groups have confronted the NCAA to make reform to these policies (Blackman, 2008; Eitzen, 1987; Grasgreen, 2013; Jackson, 2016;

Khurshudyan, 2015; Knight Commission, 1991, 2001; Mondello & Abernethy, 2000; Oriard, 2012).

One of the most scrutinized NCAA academic-related policies to date has been that which relates to the oversight of initial eligibility. Initial eligibility, in short, is the certification that a collection of academic proficiencies has been met (measured by a number of classes to be completed in each academic subject along with a "sliding-scale" minimum proficiency between standardized test score and grade point average) by student-athletes in high school to be able to take part in intercollegiate athletics (NCAA, 2015f). The sliding scale allows students with lower standardized test scores to be deemed eligible if they have a higher grade point average, and vice versa. This policy has undergone numerous iterations as a result of its ineffectiveness throughout its existence. The 2.0 high school grade point average for initial eligibility implementation in 1973 is perhaps one of the best examples of a faulty and harmful NCAA policy. This update was the second iteration of the initial eligibility policy where anyone with a high school diploma who graduated with a 2.0 grade point average or better would meet the initial eligibility criterion. The variations of high school academic rigor throughout the country made this a wildly inconsistent means of evaluating high school seniors and ultimately led to the admission of students who were woefully underprepared for the challenges of a college education. This policy contributed to some of the most unfortunate times in college athletics - times which contributed to the objectification of black males and students from lower socio-economic statuses, who, in some cases were "functionally illiterate" though participants in intercollegiate competition (Oriard, 2012, p. 13). The disparate impact of this policy left a lingering black eye on the NCAA and the students who it negatively impacted.

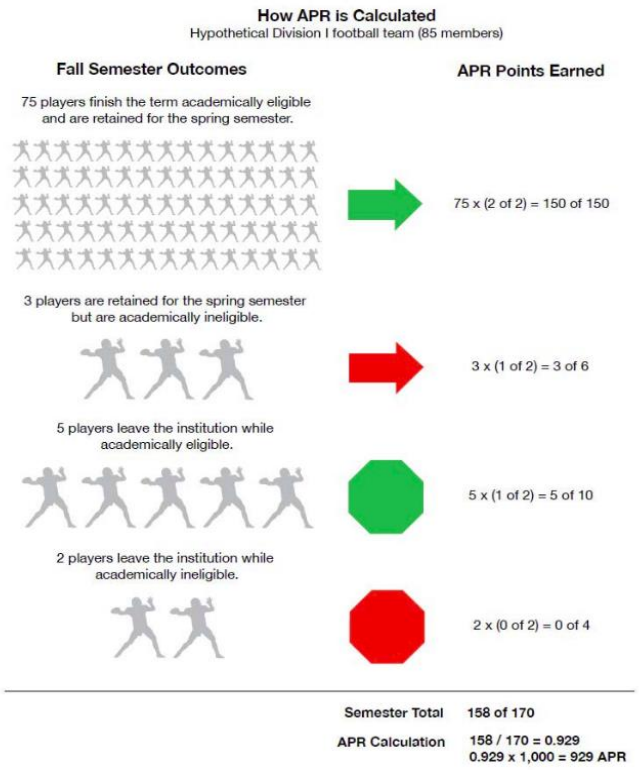
The impact of this policy, along with its future iterations, caught the watchful eyes of wealthy newspaper heirs, John and James Knight, whose family had a history of financially supporting struggling college students in Ohio. Formed in 1989 by the brothers, the Knight Commission has released recommendations to the NCAA through reports over the past three decades guided by the mission to promote educational reform which strengthens and supports the educational mission behind college athletics. The Knight Commission centers on four main principles: student-athlete safety and well-being, the education experience of student-athletes being paramount, fiscal responsibility of educational institutions and their associations, and integrity through governance and student-athlete well-being and voting power (Knight Commission, 2010). The Knight Commission has garnered a voice and credibility of which the NCAA has listened and utilized for inform policy reform. The commission acts as a watchdog for intercollegiate athletics whose influence and credibility are underscored by its elite membership. This membership is inclusive of college presidents, former high-level student-athletes, conference commissioners, senior level business executives, and even the former Secretary of Education, Arne Duncan. Its report *A Call to Action: Reconnecting College Sports and Higher Education* from 2001 made several recommendations, among which was the idea that a relationship should exist between graduation rates and post-season competition. In short, athletic programs that did not produce strong academic outcomes should be held accountable.

Two years after this report, the Academic Performance Program (APP) was developed by the NCAA and implemented during the 2003-2004 academic year. The impetus for the development of the APP is largely credited to the calls for action for NCAA policy reform made by the Knight Commission.

According to the NCAA, graduation is the "ultimate goal" for every student-athlete (NCAA, 2015d). In developing the Academic Performance Program, the NCAA went through a very thorough year-and-a-half vetting process where the newly developed program was created utilizing data which is designed to predict the desired outcome of student-athlete graduation (NCAA, 2015b; Paskus, 2012; Petr & McArdle, 2012; Petr & Paskus, 2009). Today, the Academic Performance Program continues to be the program used by the NCAA as a real-time measure to evaluate institutional academic effectiveness of student-athletes who are recipients of athletic scholarships by predicting graduation rates. The APP is comprised of two metrics, the Academic Progress Rate (APR) and the Graduate Success Rate (GSR). The APR was designed to predict graduation based on two factors: retention of a student-athlete and eligibility (NCAA, 2016a), while the GSR was designed to tell how successful a sport program is at graduating students (NCAA, 2014d)

The graph below, provided by the NCAA (2016a), is example of a fictional membership football team's APR calculation for a semester, and helps to illustrate the overall means of calculating the single-year APR rate. Each student-athlete on scholarship has the opportunity to earn two points each semester, one for remaining eligible, which is measured through a minimum grade point average as well as minimum credit completion, and one for being retained by the institution (or completion after final semester). At the end of the year, all of the scholarship student-athletes' points are tallied on a team basis (e.g., State University baseball), and that tally is divided by the total number of possible points. This number multiplied by 1000, becomes the single-year APR score for a team. The APR rate is calculated and evaluated by combining four consecutive years of scores, which are used to measure academic progress.

Figure 1
Academic Progress Rate Example (NCAA, 2016a)



The history of the APP is detailed in a 2012 article written by Walter Harrison. Harrison, the former president of University of Hartford, was tapped by the NCAA Board of Directors to play an instrumental role in providing oversight for the program in addition to a newly formed NCAA Committee on Academic Performance, (NCAA, 2015c). In the article, Harrison (2012) identifies the NCAA's goals for the formation of the APR to "create a system that will produce improved graduation performance, particularly in high-profile sports, without having disparate impact on ethnic minorities" (p. 66).

An alarming concern presented itself during the design stage of the program in 2002. According to Harrison (2012), "Data analysis during the design stage of this system also revealed that low-resource and Historically Black Colleges and Universities (HBCUs) would likely be more heavily impacted than would other institutions." (p. 71). The lowest resourced

members of NCAA Division I classification have been categorized into a classification system used by the NCAA known as Limited Resource Institutions (LRI), which are institutions which fall into the bottom 15% of resources, specifically pertaining to per-capita athletic expenditures, percentage receiving Pell grants for the entire student body, and per-capita institutional expenditures (NCAA, 2015e). Both Predominantly White Institutions (PWIs) (where whites account for 50 percent or greater of the student enrollment) and Historically Black Colleges and Universities are represented within the LRI category. Approximately 50 colleges and universities fall into this category (based on a 15% calculation of the approximate 350 Division I membership schools). Though the NCAA does not publish the names of those institutions it is highly likely that a majority of the 24 Division I HBCUs are categorized as LRI based on an analysis of spending metrics.

Table 1.2, shown below, shows the spending metrics of institutions believed to belong to LRI classification, or be on the fringe of this category. The groups below, which are explained in greater detail in Chapter 3, are public, Division I institutions, in the Football Championship Series (FCS) classification, which is home to many of the lowest resourced institutions per athletic spending in Division I. The means are calculated based on spending patterns per student-athlete over a five-year period between 2010-2011 and 2014-2015. The Likely LRI group was compiled from the Accelerating Academic Success Program grant winners, a program designed by the NCAA to provide additional funds to schools which either classify as LRIs or are in a conference where at least 60% of the membership qualifies as LRI (NCAA, 2015e). What the chart below shows, is that the HBCU group falls, on average, below the spending of institutions which are likely to be part of the LRI group, meaning that a large number of HBCUs are Limited Resource.

Table 1
Per-Capita Expenditure for Student-Athletes for FCS Public Institutions

Group	Mean	Median
HBCU	$33,373.84	$33,101.40
Likely LRI	$35,823.00	$33,426.00
<45,000k	$34,651.59	$35,074.20
<40,000k	$32,521.08	$32,155.60
<35,000k	$29,797.00	$29,741.20

Note: Averages are aggregates from eligible public FCS institutions between 2010-2011 and 2014-2015 academic years.

This is an alarming concern that points towards a potential disparate impact for HBCUs through the foundational structure of the APP - specifically the APR metric. Considering Historically Black Colleges and Universities were established to provide access to higher education to for Black Americans, especially when most institutions predominantly serving White Americans would not provide opportunities for Black men and women to study, this could contribute to the systemic institutionalized oppression of people of color (Office of Civil Rights, 1991). It could be argued that the negative press received by HBCUs and lack of opportunities to generate funds through postseason eligibility as a result of APR penalties could substantially injure the reputation of many HBCUs and further limit access to a quality education for many Black men and women in the United States today and in the future.

Problem

The Academic Performance Rate metric is now in its 14th year of implementation and is nearing its 11th year of the measuring programs based on the four-year (multi-year) APR. During the lifetime of the program, a concerning trend has emerged related to low APR scores certain

subgroups of institutions - mainly those found in the FCS, or Football Championship Subdivision. The FCS is a classification for institutions who sponsor Division I football, which groups together colleges and universities with lower football game attendance and resource allotment towards their athletic and football programs (compared to the wealthier FBS classification). Its counterpart is the FBS classification, or Football Bowl Subdivision, which is comprised of traditionally wealthier schools with greater football attendance. The FCS is host to the overwhelming majority of schools in the bottom quartile of funding under the NCAA Division I classification. This is inclusive of many schools categorized as LRI and all 24 Division I HBCUs.

The consequences for low APR scores are a host of NCAA academic sanctions and penalties (NCAA, 2016a). These penalties, known as level I, II, and III, vary in severity depending on the ability to meet the NCAA APR benchmarks by a particular collegiate athletic program. These penalties range from public reprimand and decrease in practice time in level I infractions, to the most serious sanctions, which include post-season bans and scholarship reductions in second and third year offenses. At level I, the NCAA restricts the number of hours that a program can participate in practice each week from 20 hours to 16 hours, with the four hours removed to be replaced with academic activities. At level II, additional reductions in practice and competition time are implemented. Finally, the level III sanction could result in a myriad of actions, such as a coaching suspension, restricted NCAA membership, or financial aid reductions. Though post-season bans are frequently imposed on programs as a result of APR sanctions, they are not designated as penalties by the NCAA, and therefore are not included in the analysis for this study (NCAA, 2016a). A post-season ban can occur at any level of academic sanction so long as the program being reprimanded has an APR score below the

NCAA's required multi-year benchmark. I will address the different cutoffs for penalties later in this paper, as it has adjusted during the history of the APP.

Noticeably, colleges and universities from the FBS tend to have significantly higher APR scores and, as a result, are sanctioned less by the NCAA (NCAA, 2017b). Even fewer sanctions have been imposed upon a group of 65 schools known as the "Power 5" or the "Autonomous" conferences. These institutions are all part of FBS classification and are known for belonging to the five wealthiest conferences (according to annual revenue). As a collective, they also spend the greatest amount on athletics and net the greatest amount of revenues, hence the name "Power 5" (Lavigne, 2016; USA Today, 2016). These colleges and universities are also known as having "autonomy" due to legislation by the NCAA from 2014. In that legislation, the NCAA granted autonomy to these institutions to make policy decisions related to their governance, which conferences outside this group can also choose to adopt. (NCAA, 2014a). The large absence of penalties to colleges and universities in FBS classification and the trend of mostly FCS, LRIs garnering the lion's share of penalties due to falling below the NCAA prescribed APR "success" benchmarks, has led critics of the program to call it unlawful and discriminatory (Blackman, 2008). These penalties also potentially have a disproportionate impact on Division I Historically Black Colleges and Universities and Limited Resource Institutions (Blackman, 2008; Grasgreen, 2013; Jackson, 2016; Khurshudyan, 2015).

If the APR metric does disproportionately impact HBCUs, it is more problematic than it seems on the surface. Significant attention has been brought to NCAA policy having a disparate impact on Black student-athletes in the past. Specifically, four Black students challenged the legality of NCAA's Proposition 16. This policy, implemented in 1992, imposed stricter initial eligibility requirements for students to qualify for collegiate athletic competition (Mondello &

Abernethy, 2000). A court decided that this policy had a disparate impact on Black student-athletes during this time period. Should the APR also have a statistically proven disparate impact on institutions who predominantly serve Black student-athletes, then the NCAA would be contributing to the systematic oppression of the HBCU.

It is also important to address between group comparisons between HBCUs and LRIs regarding overall impact. Harrison's (2012) prediction of the impact of both types of institutions is significant because it addresses two predictive factors - resources and mission. There are institutions that are Predominantly White Institutions (PWI), which also qualify as LRIs. This, then, allows for between group comparison, of HBCUs and similarly resourced PWI, or non-HBCU institutions. Therefore, the goal of this policy analysis will be to investigate whether or not the APR program has a disproportionately adverse impact on HBCUs in Division I in comparison to similarly resourced non-HBCU institutions. A central question behind this policy analysis is whether sanctions are a result of resources, academic mission, or both.

Significance

Criticism of the APR metric has been plentiful from a myriad of sources as it pertains to its impact on HBCUs and LRIs. As early as 2006, Pat Forde, a former columnist at ESPN, wrote about the deepening of the caste system between the haves and have-nots. Forde's suspicion about the APR metric centered on the root cause of big money. Jarrett Carter (2016), a founder and publisher of a HBCU news digest, has asked the NCAA to be honest with HBCUs about their relationship and feels that the NCAA is self-serving its own interests of protecting the big business of the autonomous conferences. Derrick Jackson (2016), a National Association of Black Journalists award-winning sports journalist, claimed that HBCUs are punished for having all-black or mostly black programs. He cites schools like the University of California at

Berkeley, who spend over $300,000 annually per each football player but do not graduate half of those students. He notes that Morgan State has the highest expenditure among HBCUs per football player at $38,000 - nearly 90% less per player than Cal. To give a comparison, the average spending per scholarship football student-athlete among FCS institutions was $42,000 in 2014, with HBCUs ranging between $21,000 and $38,000 per student-athlete (Jackson, 2016).

The gravity of the APR outcomes is alarming. APR post-season bans from the 2011-2012 academic year hit HBCUs hard: 15 of the 18 teams penalized were HBCUs (Grasgreen, 2013). 2010-2011 saw four HBCU teams banned from post-season competition (Grasgreen, 2012), and 2009-2010 saw five HBCUs banned from post-season competition where a nearly a third of the 103 penalties doled out went to HBCUs (Hosick, 2011b; Moltz, 2011). The only teams to receive post-season sanctions in 2016 were HBCUs - seven in total. In all, of the 31 total sanctions, 29 went to HBCUs (Hosick, 2016c).

The NCAA is not ignorant to the fact that the APR sanctions have negatively impacted schools with less resources. It identifies a lack of resources as a reason why poorer schools struggle. Where wealthier schools can hire more tutors, advisors, and other administrators, HBCUs just do not have the resources to do so (Hosick, 2011b). Tom Paskus, the Principal Research Scientist at the NCAA, has identified predictive measures which may contribute to APR concerns for HBCUs (2012). This list includes but is not limited to mission, resources, academic profiles, and support services. Myles Brand, the former NCAA president until the time of his death in 2009 identified that both low-resource and HBCUs were of concern for the NCAA, “It’s more about low-income, low-resource schools. We’re concerned about all schools with a low-support basis, and there are a number of HBCUs in that category” (Associated Press, 2007, para 5). Why are HBCUs the most sanctioned group of schools by the NCAA? Is it a

resource issue or a mission issue, or both? Understanding this issue in greater depth will help provide support to make recommendations for policy reform so future policy does not unfairly target certain subgroups. Further research will help to provide more context to our collective understanding of a policy which has largely been ignored by scholarly, empirical researchers.

Gaps in Literature

To date, there have only been three scholarly, empirical studies which have attempted to better understand the impact of the APR metric on Division I programs. The first study was conducted as a means of understanding the perception of the APR metric in intercollegiate athletics among wealthier Division I institutions. The study conducted by Christy, Seifried, and Pastore (2008) surveyed athletic directors, faculty athletic representatives (FAR), senior women's administrators (SWA), and head coaches in the six Bowl Championship Series (BCS) conferences. During 2008, this group included the Big East, Big Ten, Pac-10, Southeastern, Atlantic Coast, and the Big-12 conferences. With recent conference realignment, the Big East conference is no longer considered one of the power conferences. Christy et al. (2008) found that 64% of their participants felt that the APR would have a positive impact on intercollegiate athletics while 32% felt it would have little or no impact and were critical of the metric. The overall results were based on the opinions of the professionals listed above. The research study did not attempt to understand how the APR impacted the NCAA Division I membership as a whole, just the membership perceptions of the metric. This study also noticeably left out the opinions of HBCU and LRI institutions.

Kirkpatrick (2012) utilized a similar survey as used in the Christy et al. (2008) study to evaluate the perceptions of the impact of the APR on NCAA membership, but changed the target population by surveying membership categorized as LRI. He accomplished this by triangulating

data related to college finances in addition to utilizing APR scores to help provide greater context to the responses from LRI membership. Kirkpatrick (2012) also broadened his participant pool to include administrators from a greater variety of departments, including academic support, which was a key constituency left out of Christy et al.'s (2008) study. His research furthered perceptions of APR into groups which were impacted by the APR most adversely. Kirkpatrick (2012) found approximately 29% of respondents felt that the APR would have either a negative or tremendously negative impact on intercollegiate athletics. From that group, approximately two-thirds of respondents had academically underperforming basketball and/or football teams.

The third, and most similar in design to my study, was conducted by Johnson, Wessel, and Pierce (2012). Their study focused on determining if selected variables were predictive for APR scores. The study took place at a large Midwestern university and investigated 10 variables in total at the student-level. These variables of race, gender, distance from home, high school GPA, standardized test score, major, sport type, coaching change, playing time, and team winning percentage were used in a least squares linear regression to explain APR scores as a dependent variable. Their findings showed that gender, race, sport, coaching change, and team winning percentage significantly explained roughly 39% of APR scores (Johnson et al., 2012).

Unfortunately, in the first two studies, the end results are based on perception of impact and not the actual relationship of the APR on particular schools and sport programs. These two prior studies also do not dissect LRI institutions into subcategories or focus on the groups which have been impacted most adversely by the APR to date - Historically Black Colleges and Universities. Lastly, these studies are unfortunately outdated. Although they both are seminal for this topic, in addition to scholarly studies grounded in empirical research, the APR has changed

in the past five years, and so has the impact on NCAA membership institutions. The NCAA has implemented support programs for LRIs in this time, like the Accelerating Academic Success Program (NCAA, 2015e), in addition to developing HBCU/LRI advisory groups, and partnerships with the N4A: National Association of Academic and Student-Athlete Development Professionals. Needless to say, there is great need for an updated study which analyzes the most current data to understand how specific variables are related to APR outcomes with least resourced NCAA Division I membership. The third study is primarily outdated due its timing and it also only evaluated the predictive nature of variables at the institutional level. My desire was to further the scope of this study and incorporate the predictive statistical data analysis provided by Paskus (2012) and Harrison (2012) in creating my study, which focused on analysis at the institutional level.

My study sought to expand on the breadth of these three studies and fill these gaps and promote further inquiry into current NCAA policy. As a professional in the industry who has worked with interpreting and submitting APR data for NCAA review, I find this issue of the utmost importance for consistency and fairness in intercollegiate athletics.

Research Question

Based on the current conversation centered around the NCAA APR along with scholarly research which investigates the impact of the program on HBCUs and LRI institutions, I developed the following research question:

1) Are HBCUs disproportionately affected by APR penalties/sanctions relative to other NCAA Division I colleges with similar resources?

I focused on the 2010-2011 to 2014-2015 academic years and used the following databases to gather data to address my research questions shown below. The Integrated

Postsecondary Education Data System (IPEDS) by the National Center for Education Statistics (NCES), the Knight Commission Athletic & Academic Spending Database for NCAA Division I, and lastly the Academic Progress Rate (APR) Database developed by the National Collegiate Athletic Association (NCAA), provided the necessary data to make statistical inferences. Data was used from those years, as it is the most current and hence will be the most reliable in making accurate assessments of schools, and it also falls outside the data range of similar studies conducted by Kirkpatrick (2012) and Christy et al. (2008). I chose public colleges and universities from the FCS with similar athletic spending profiles, who also sponsored football to form treatment groups to compare to the control group of 19 public HBCUs in Division I. The two conferences who host the majority of HBCU membership are the Mid-Eastern Athletic Conference (MEAC) and Southwest Athletic Conference (SWAC), in addition to the Ohio Valley Conference where Tennessee State University, the only other HBCU in Division I, is a member.

Chapter 2 will take a more in-depth look at the nuanced nature of the development of the APR and its annual impact on member schools through NCAA documentation and scholarly research. Two theoretical lenses will be introduced to give this issue better contextual support. Chapter 2 will also focus on understanding the HBCU better and the history of policy enforcement and reform in the NCAA. Chapter 3 focuses on the logistics and specifics behind the research design, data, and finally methods. Chapter 4 is a comprehensive analysis of my results, and finally Chapter 5 brings together the results into discussion, recommendations for policy, and future research.

Chapter 2: Literature Review

Introduction

In order to better understand the relationship between the NCAA APP, APR metric, and NCAA Division I membership schools, I conducted an extensive literature review supported by scholarly research, press releases and articles, conversation by pundits and journalists, and historical texts and documents which help inform my research question. This chapter seeks to explore the existing literature on this topic to sufficiently address the research question related to impact of academic sanctions on lower resourced Division I schools. First, I revisit the context and background which informs this study. Second, I introduce the theoretical framework which provides a contextual lens to view and interpret the problem. Third, I look at the historical evolution of the NCAA and the origins of the Academic Performance Program. Fourth, I look at the current state of the APR and its impact on NCAA Division I membership schools. Fifth, I will provide a synthesis on the current literature related to the impact of the APR program on HBCUs. Lastly, I examine gaps in the literature which position this study amongst related scholarly research.

Higher Education for Black Americans

Background

Educational inequality has marred the United States educational system since the origins of higher education at Harvard in the 1630's (Lucas, 2006; Veysey, 1965). A White, male only educational system originated for men to study divinity and lead religious congregations in newly developed communities in the early settled colonies. This system would provide access to institutions of education primarily for a small minority of wealthy Whites for the next 200 years. It was not until the early 1830's when higher education finally broke this tradition and presented

first access to Black Americans and women at Oberlin (Lovett, 2011; Lucas, 2006; Morris, 2014).

This 200 year "head start" marked a stark contrast of opportunities in higher education in favor of Whites, while many Blacks suffered from the cruel societal injustices of slavery and indentured servitude. This yielded a substantially different playing field for Black and White students in American higher education which still is present today. Understanding how these differences have manifested in the American education system will help to provide the social context for the comparison of HBCU and similarly resourced PWIs (or non-HBCUs) in this study. It will also shed light on significant challenges that HBCUs continue to face in keeping their doors open and providing a high-quality education for their target population of lower socioeconomic status and first-generation Black Americans.

Shortly after Oberlin opened its doors to Black Americans, the first HBCU was founded in Cheyney, Pennsylvania in 1837. The proliferation of HBCU openings over the next half-century was a result of necessity, as most colleges and universities in the United States continued to exclusively serve upper-class White men (Lucas, 2006; United States Department of Education, Office of Civil Rights, 1991). This ideal was reinforced by the 1896 U.S. Supreme court ruling of Plessy vs. Ferguson which created a "separate but equal" doctrine, which, among other state-sponsored services, had a significant impact on primary and secondary public schooling in the United States. The court ruled that "separate but equal" did not violate the 14th amendment, and as a result, Blacks were educated in inferior public educational systems until "separate but equal" was deemed unconstitutional and overturned in the ruling of Brown v. Board of Education in 1954. This extension of injustice through the United States educational

system has had a crippling effect on the Black community in America (Bankston & Caldas, 1996; Coleman, 1990; Tyack, 1974).

Though Brown vs. Board of Education passed in 1954, public HBCUs are still fighting for equitable treatment from their state governments when it comes to funding. Over 60 years later, states are still seeking equitable resources set forth in the Morrill Act of 1890. The Morrill Act of 1890 required states to show that race was not a criterion used in admissions or to develop separate land-grant institutions for persons of color (Arnett, 2015). To complicate this matter further, the impact of financial aid at HBCUs and for Blacks in general has been disparate by nature in usage and lasting impact, compared to Whites. Goldrick-Rab, Kelchen, and Houle (2014) found that the greatest need for financial aid comes from Black students. Current conversation from policy makers regarding restricting access to student loans will disproportionately impact these students, especially those attending HBCUs. Scott-Clayton and Li (2016) measured this concerning trend in regards to debt between Whites and Blacks after college. On average, Blacks graduate with an average of roughly $7,500 more debt than their White peers. When accounting for interest accrual and graduate school borrowing, this debt disparity triples, four years after graduation.

Some HBCUs have been successful in their fight for equitable funding. In 2002, Mississippi awarded a $246 million settlement to its state's three public HBCUs - Alcorn State, Jackson State, and Mississippi Valley State, after a long 27 year desegregation lawsuit in the *Ayers vs. Fordice* case. The conditions of this outcome required these schools to produce a 10% non-Black enrollment over a three-year period in order to receive a portion of the funds (Stewart, 2012). The payout was to take place over 17 years and is to be put towards academic programs for roughly half of the monies, while approximately $70 million was put towards capital

improvement projects, and $105 million was contributed to public and private endowments (ABC News, 2002). In 2010, it was reported that the $246 million payout would not be fully paid and be curtailed in 2012 due to lack of available funds by the state. As a result, the state looked for alternative means for meeting the requirements of the settlement. This shortfall meant an annual funding decrease from $20 million to $13.4 million (Associated Press, 2010). In its time, the funding has thus far supported 30 programs including a number of new undergraduate and graduate programs at all three schools. Unfortunately, not all programs have been implemented, including a $35 million endowment for mandated academic programs, such as the engineering program at Jackson State. Though the settlement has brought new resources and funding to the three HBCUs in Mississippi briefly, recruitment efforts have been very challenging to enroll White students, the Black student enrollment has dropped, and Mississippi has made significant cuts to state appropriations as a whole. At Mississippi Valley State, state appropriations have dropped from nearly $9,000 per student in the 2000 to a little over $5,000 for the 2015-2016 school year (Harris, 2018). The challenges of closing the gaps between the three HBCUs and their PWI peers in Mississippi still persist – along with several other states who are currently fighting similar battles.

Other states have had similar lawsuits with large settlements paid out to the HBCUs within those states. Tennessee State University was the beneficiary of a lawsuit by an African-American student named Rita Geier. Geier's claims paralleled those from Mississippi as she claimed there was inequitable funding for public higher education systems. In 1984 the state finally settled, and established the Geier Consent Decree in 2001, which set goals for the state to increase diversity, promote professional development, and a number of other diversity measures on campus. The result for Tennessee State University is a non-African-American enrollment of

30 %, which has created the most diverse school in the state's system and has the positive benefits of helping to promote the globalization of the campus (Stewart, 2012).

Alabama's HBCUs, Alabama State and Alabama A&M, reached a $200 million settlement with the 1981 Knight v. Alabama lawsuit when Dr. John Knight, an Alabama State vice president, asserted that the HBCUs in Alabama were not privy to similar resources which were allocated to the public PWIs within the state. The lawsuit was finally settled in 2006 and the monies have been allocated towards recruiting more diverse faculty, better academic programs, newer facilities, and initiatives to increase diversity on campus (Stewart, 2012).

Maryland's and South Carolina's HBCUs are currently fighting their own version of the same struggle, claiming that they too do not receive equitable state funding compared to their state's predominantly White university peers (Arnett, 2015). In 2000, Maryland HBCUs brought forth issue with a state agreement with the United States Department of Civil Rights to bring the state into compliance with the Equal Protection Clause of the Civil Rights Act of 1964. The claims set forth by the Maryland Higher Education Commission contest that the state has not made the appropriate steps to rid itself of the vestiges of segregation which existed during the pre-Civil Rights era. Specifically, the Commission made claims that academic programs at the wealthier, PWI institutions "eroded" similar programs at the state's HBCUs (Prudente, 2017, para 2). A call for reparations included a transfer of funds supporting the programs at the wealthier institutions to the HBCU public universities. In February of 2018, Governor Larry Hogan said that he would be willing to pay up to $100 million to the state's four HBCUs in order to settle the nearly two decade suit, but representatives for the HBCUs say that their demands of creating dozens of new, in-demand educational programs would put that number closer to several

hundred million dollars, meaning this lawsuit could continue on for years to come (Richman, 2018).

In South Carolina, similar claims were filed against the state claiming that duplicate programs at the state's non-HBCU schools are hurting South Carolina State University's programs (Smith, 2015). The State of South Carolina voted to close the university for two years to help with a $17.5 million deficit, but the school remained open and closed several buildings on campus to alleviate spending (Frazier, 2015; Lindner-Altman, 2015). The lawsuit against the state is still in litigation.

Without significant intervention, many of these institutions may see the same fate as struggling Cheyney University which, as mentioned before, is the nation's first HBCU founded in 1837. Cheyney is literally falling apart. Campus facilities are deteriorating and in need of significant attention as the university does not have the funds to make necessary repairs to the aging structures. Meanwhile, Cheyney is hemorrhaging students with recent steep student enrollment declines and is struggling with significant financial deficits (Woodhouse, 2015). Cheyney received an $8 million credit line to help pay its bills through the end of the 2017-2018 academic school year, but no future sustainable option has been implemented (Stuart, 2017). As a result, Cheyney may be forced to close its doors in the not too distant future, as it is on the verge of losing accreditation as it has been on a probationary status since 2015. Additionally, it is being investigated for mismanaged funds, specifically $7 million dollars of uncollected tuition in recent years which makes digging out even more difficult. In August 2017, the Board of Governors of the Pennsylvania State System of Higher Education approved the forgiveness of $30 million in school debt if Cheyney can manage to balance its budget in the next three years (Suggs, 2018).

The history of the HBCU in American higher education has been an existence littered with turmoil, roadblocks, and struggle for equal footing amongst their PWI peers. John Lee and Samaad Keys of the Association of Public Land-Grant Universities (2013) published the seven major pitfalls which HBCUs, which, if not avoided, could lead to the eventual demise of many these institutions. Among these seven pitfalls are declining federal support, failure to compete, declining retention and graduation rates, declining enrollments, changes to the financial aid system, increased regulatory requirements and penalties, and lack of collective action (Lee & Keys, 2013). With no major changes to the current trends in higher education, I suspect that many of these institutions will continue to suffer to the extent of forced mergers with other state institutions, or worse, closure of these storied colleges and universities. Without the availability of well supported HBCUs, many Black Americans, especially those coming from lower socioeconomic backgrounds, will not have to access to a meaningful and quality education designed for their benefit.

Challenges for Black Americans. The impact of injustices against Black Americans have led to what House and Williams (2000) describe as high predictability of one's socioeconomic status in America based on race. In the United States, low socioeconomic status is a strong predictor of lower educational achievement, poor health, and poverty (American Psychological Association, 2016). According to the National Student Clearinghouse Research Center's 2017 report on graduation rates by race from students entering college in 2010, there exists a substantial difference in completion rates between black and white students. Of White, Black, Hispanic, and Asian students, Black students graduate at the lowest six-year rate – at about 38%. White students, by comparison, graduate at a 62% rate in six years (Shapiro, Dundar, Huie, Wakhungu, Yuan, Nathan, & Hwang, 2017).

According to an analysis of the 2004 Survey of Income and Program Participation by Tamborini, Changwhan, and Sakamoto (2015), there is a substantial benefit for the average American to earning a bachelor's degree. On average, men who earn a bachelor's degree make approximately $900,000 more in their lifetime than those with a high school diploma. For women, the lifetime difference is around $630,000. When it comes to those who earn advanced degrees in comparison to those with high school diplomas, the difference is $1.5 million for men and $1.1 million for women. It may not be the sole factor for determining socioeconomic status, but it is clear that there is a very strong relationship between level of degree earned and socioeconomic status. It is evident that the role of the HBCU is extremely important for Black Americans coming from lower socioeconomic status for social mobility.

Low graduation rates hurt Black communities deeply when it comes to earning potential. Race plays a significant factor when it comes to earned wages as well. On average, Black men earn approximately 70% of what White men earn, and Black women earn approximately 82% of what White women earn. These numbers are even more unsettling considering that this rate has been falling since 1979 and represent a 10% overall drop in that time for Black men and women compared to their White peers (Daly, Hobijn, & Pedtke, 2017). Daly, Hobijn, and Pedtke (2017) contend that the factors that contribute to this wage disparity are explained only partially by occupation choice, educational attainment, and age, but mostly are unexplained. The unexplained differences are hypothesized to be attributed to discrimination, school quality, and general opportunity.

When it comes to health, The Center for Disease Control reports that Black mortality rates are higher than Whites when it comes to heart disease, cancer, and stroke (Achlenbach, 2017). Though there has been a substantial decrease in the "all-cause" mortality rates between

1998 and 2015 from 33% to 16%, Black life expectancy rate is three and a half years less at birth compared to white. Blacks are also more likely to live in poverty, be unemployed, and have higher obesity rates (Achlenbach, 2017).

Despite the overwhelming obstacles that Black Americans have had to overcome in the past four centuries, access to higher education has positively impacted social mobility. This has been an opportunity for a large part of the past two centuries because of the HBCU. The HBCU has not only survived, but remained a staple of providing access to a meaningful education for many Black Americans for nearly two centuries. Though overall enrollment has increased at HBCUS between 1976 and 2014, from 223,000 to 294,000 enrolled students, overall percentages of Black degrees earned at the undergraduate level from HBCUs has dropped from 35% in 1976 to 15% in 2014. At the graduate level, overall Black degrees earned at HBCUs have dropped from 14% in 1976, to 12% in 2014 (NCES, 2017). In recent years, the HBCU has been criticized for overall graduation rates, which hover around 30% of total student population on average (Gasman, 2013; NCES 2017). A recent report by Nichols and Evans-Bell (2017) on Black student success indicates the HBCUs are graduating a greater percentage of low-income Black students than their PWI peers.

The impact of the HBCU for Black Americans. One cannot understate the value of the HBCU to Black Americans. Without these institutions, it is likely that there would be a much more significant economic polarization according to race. According to Chetty, Friedman, Turner, Saez, and Yagan (2017) HBCUs do a better job of aiding in the social mobility of their lowest-income students into the top quintile of earners as adults compared to their average peer institution. The HBCU mission of attracting a significant number of lower-income students, has helped contribute to the upward economic mobility for many Blacks in the United States, which

also has contributed towards closing earnings gaps between Whites and Blacks (Reeves & Joo, 2017). Though the percentage of Black students attending HBCU post-secondary institutions hovers around the 10% mark, and HBCUs make up less than 3% of post-secondary institutions in the United States, there is a significant nationwide degree attainment for Blacks attending HBCUs.

A degree from an HBCU has considerable short-term and long-term benefits for Blacks. The educational environment created at the HBCU has been shown to have a more positive impact on African-American self-concept, academic achievement, cognitive development, feelings of support, educational aspirations, educational achievement, degree attainment, college satisfaction, and success after college than at their PWI peer institutions (Allen, 1992; Allen, Epps, & Haniff 1991; Astin; 1993; Berger & Milem, 2000; Bohr et al., 1995; Fleming, 1985; Gurin & Epps, 1975; New, 2015; Pascarella et al., 1996). About a third of all conferred engineering degrees to Blacks were from HBCUs (Matthews, 2011). HBCUs are responsible today for about 15% of all degrees earned by Blacks in the United States (Anderson, 2017) and are nine of the ten top doctoral granting institutions to blacks in science, technology, engineering, and mathematics (National Science Foundation, 2015). The importance of the HBCU cannot be understated as a means of providing not only access to higher education, but highly desirable outcomes for attendees.

Challenges for HBCUs and Division I Intercollegiate Athletics

Intercollegiate athletics has provided access to higher education for many Black Americans over the past half-century. In NCAA Division I athletics, though, there is a troubling trend regarding an overrepresentation of male Black student-athletes in revenue-generating sports of football and basketball. Between 2007 and 2010, Black students constituted 57.1% of

football teams and 64.3% of basketball teams in the six most affluent NCAA Division I conferences in the country (Atlantic Coast Conference, Big East Conference, Big Ten Conference, Big 12 Conference, Pac 12 Conference, and the Southeastern Conference), yet, Black men only represented 2.8% of the undergraduate population at these respective schools (Harper, Williams, & Blackman, 2013). Harper (2006) posited "Perhaps nowhere in higher education is the disenfranchisement of black male students more insidious than in college athletics" (p. 6).

The trend of overrepresentation of Black males in college athletics, coupled with the outcome of very low graduation rates for these students, has largely been considered the exploitation of Black males for their athletic prowess (Harper, 2013; New, 2016). Harper et al. (2013) noted troubling trends of lower six-year graduation rates of Black men in the revenue producing sports of football and basketball in these conferences (50.2%), compared to the relative student-athlete population (66.9%), the student body (72.8%), and of Black males overall (55.5%). These overall trends suggest that graduation has not been a priority for these students, which will hurt their long-term career options when the pursuit of sport finishes. In fact, Harper (2013) found that universities in these conferences graduate Black male student-athletes less than their Black male peers on campus 72% of the time, and graduate at lower rates than the general student-body 97.2% of the time. These findings are representative of schools with the fewest NCAA Division I academic sanctions in the entire country (Hosick, 2011b; Hosick; 2016c; Moltz, 2011.) Though these findings have not been generalized to HBCU populations, it does signify that there is a significant problem in intercollegiate athletics.

If colleges and universities with the greatest amount of resources are struggling to graduate Black male student-athletes, it does not bode well for the majority of the HBCUs in

NCAA Division I, especially those who fall into the LRI classification. To compound this issue, if the APR has most negatively impacted HBCUs compared to their PWI peer institutions, it provides yet another barrier for Black-serving institutions to overcome. It is for this reason that I have selected two theories to contextualize this issue. The theoretical model that I have developed addresses the institutionalized barriers related to race and challenges that limited resources provide, as the best lens to evaluate this problem.

Theoretical Framework

Evaluating the impact of the NCAA APR program on different subsets of colleges and university is complex to say the least. This topic is difficult to contextualize due to the multidisciplinary nature of this study as it touches themes related to areas of finance, sociology, education, psychology, and economics, amongst others. To better inform the direction of my study and how I analyzed this metric, I developed a theoretical model centered on two foundational theories. These theories address inform my research question directly as it pertains to the role that race and resources play in penalty distribution. Those two theories represented in this study are Critical Race Theory and Resource Dependence Theory.

Critical race theory. Drawing inspiration from Marx, Critical Theory was created by a group of researchers at the Frankfurt Institute for Social Research in 1937 (Wellmer, 2014). Led by director Max Horkheimer, the group of six researchers from varying disciplines, such as economics and philosophy, echoed Marxist theory on capitalism.

Their development of this theory provided further depth on the impact of a capitalistic society on humankind as an obstacle to human progress. Horkheimer's group claimed that capitalism would drive society to barbarism (Horkheimer, 1972). Horkheimer's (1972) belief is grounded in the idea that there is the possibility for a society to exist where an association of

liberated individuals would have an equal chance for self-development, though in order to do so would require a human struggle and social consciousness. Therefore, Critical Theory would be a mechanism for social change and equity. Critical Theory has not stayed static over time, but has evolved to numerous new theories. The main theory which provides the theoretical context for this study is Critical Race Theory (CRT).

Critical Race Theory emerged in the 1980s as a means for addressing the paradox that racism still exists in social practices and institutions despite the social and legal condemnation and rejection of such practice (Harris, Crenshaw, Gotanda, Peller, & Thomas, 2012). It is considered an intersection of race, law, and politics, and may explain elements of inequity which exist between PWI and HBCU institutions. Especially when it comes to education, there has been a history of racist practices which inform the use of Critical Race Theory as a foundational theory for this paper.

On the topic of Black, male, student-athletes in community colleges, Harper (2009) claims the following: "Critical Race Theory is used to consider the educational outcomes that could accrue when the interests of black male student-athletes converge productively with the interests of community college administrators, faculty, and coaches" (p. 29). The productive nature of this relationship would be less rooted in what black athletes can do for the institution, and more centered on the betterment of these men through effective mentorship and degree attainment. Though the community college is a very different model than four-year colleges who sponsor Division I athletics programs, the underlying challenges for Black men in higher education are very similar. If themes of exploitation are present in community colleges, they are certainly present in athletic revenue-producing institutions. As I quoted earlier in this chapter, Harper (2006) uses the term "insidious" to characterize the role of college athletics in the

disenfranchisement of Black men in higher education (p. 6). The role of educational systems in contributing to racist practices which impact Black men is does not solely exist in higher education, but is found in primary and secondary education and perpetuated in higher education. Benson (2000) found that young Black men received messages to prioritize sport over academics in high school which only was exasperated when those students reached the university. Black student-athletes have shared that they feel White professors do not take them seriously as students (Perlmutter, 2003). When it comes to engaging with professors, which is critical to student-athlete success, Comeaux and Harrison (2007) found that professors devoted significantly more time with White student-athletes than Black student-athletes.

These overt and covert signals which are embedded in the educational experience for Black student-athletes seem to be reinforced by practice of educators which is racially motivated and undermines the educational attainment and aspirations for Black men. When applying these themes to high stakes intercollegiate sports where billions of dollars are exchanged annually on athletic prowess, it only further drives the concept that racist practices are at play to yield certain outcomes in athletics from Black men. This occurs where these students do not get paid beyond the cost attendance.

Resource dependence theory. Resource Dependence Theory emerged around the same time as Critical Race Theory, in 1978. Pfeffer and Salancik's (1978) landmark study in *The External Control of Organizations: A Resource Dependence Perspective* put forth framework to explain how organizations can "reduce environmental interdependence and uncertainty" (Hillman, Withers, Collins, 2009, p. 1).

Pfeffer and Salancik (1978) proposed a five-tiered approach to assist organizations with minimizing the impact of the environment dependency. These five tiers are: (1) mergers/vertical

integration, (2) joint ventures and other interorganizational relationships, (3) board of directors, (4) political action, and (5) executive succession collectively or independently are means for an organization to move towards a less volatile relationship with the external environment. In the context of this study, the lack of sustainable resources at HBCUs could mean potential future mergers, partnerships with better resourced non-HBCUs, and political intervention to fund these institutions more consistently with their in-state PWI peers. As this dissertation focuses on the comparison of HBCU and PWI schools of similar resources, it would provide a helpful means of analyzing and interpreting the impact of resources on similarly resourced HBCUs and PWIs.

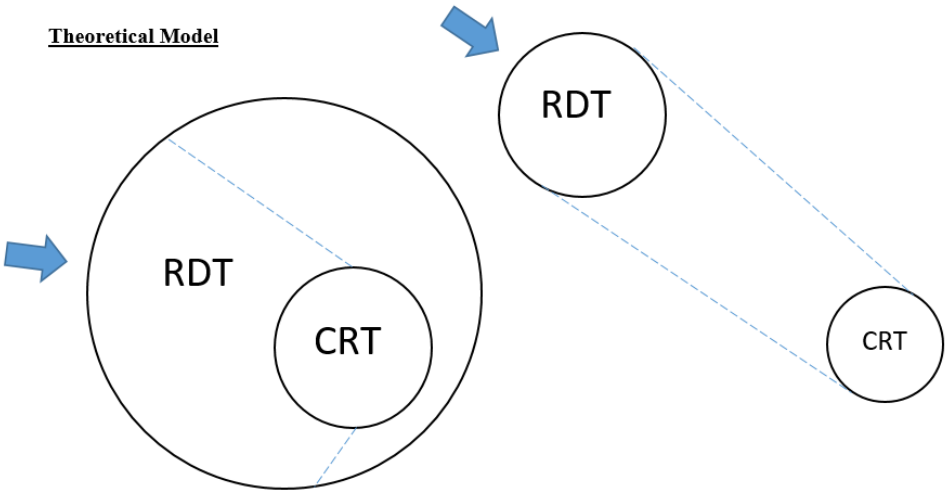
At its core, Resource Dependence Theory (RDT) sees the organization as an open system with a dependence on the external environment and its behavior. In simple terms, to understand the behavior of an organization, one must first understand "the ecology of the organization," or the relationships to the external environment (Pfeffer & Salancik, 2003, p. 1). Managers who can effectively exert control over their resources have greater power in their organization and environment (Ulrich & Barney, 1984). This takes shape as organizations attempt to minimize other's power over them while increasing their power over others (Hillman et al., 2009). Contextually, RDT explains the challenges that the HBCU president, athletic department, and university face in competing with institutions whose resources dwarf theirs. The HBCU struggles for sound footing as a result of limited resources and continues to have difficulty in the navigation through the college athletics landscape.

Though this model was developed outside of the educational realm, much of its foundational philosophies could be applied towards better understanding the uniqueness of higher education functionality. RDT was used in a 2013 study by Coupet to investigate the impact of revenue streams, and the how the dependence of those streams impacted graduation

rates for students at HBCUs. Coupet found that the simple association of being an HBCU was positive for graduation rates, yet institutional support expenditures were negatively associated with graduation. The study did find that instructional expenditures were positively associated with graduation. As HBCUs are very dependent on revenue streams from the government, the study suggested diversifying streams of revenue by considering mergers, joint ventures, and diversifying the board of directors.

Theoretical Model.

Figure 2
Theoretical Model: Adapted from Harris' Critical Race Theory (2012) and Pfeffer and Salancik's Resource Dependence Theory (1978)



The intersection of Critical Race Theory and Resource Dependence Theory provides a lens as a critical paradigm used to analyze the financial power discrepancy that exists in college athletics. By layering these two theories and viewing the problem through the RDT lens, it allows for a critical look at the role of race in this study. As former NCAA president Miles Brand identified this problem as a resource issue rather than a race issue, it makes sense to use RDT as

the top lens to interpret the problem (Blackman, 2008). This is also supported by the fact that none of the wealthiest 65 member institutions in NCAA Division I have been penalized under the APR metric throughout the duration of this study. These theories can also help to describe the patterns of behavior which may contribute to the disproportionate amount of APR sanctions imposed upon HBCUs. Understanding the historical impact of the NCAA policy as it relates to governance will provide further merit for the choice of these theories and paint a more complete picture of the environment where these theories are applied.

The NCAA and the Governance of College Athletics

Long before the National Collegiate Athletic Association came into existence, the first intercollegiate sporting contest between Yale and Harvard's rowing teams occurred on Lake Winnipesaukee in New Hampshire in 1852 (Lewis, 1970; Oriard, 2012). As with most competitive contests, controversy ignited when the Harvard team used a coxswain who was an alumnus and won. Yale balked at the use of a non-current member of Harvard's boat which was the first record of a need for legitimacy in college sport. Less than two decades later the first intercollegiate football game was played between The College of New Jersey, known as current day Princeton University, and Rutgers College, known as current day Rutgers University, in New Brunswick, New Jersey (Lewis, 1970). Football quickly became very popular, bypassing crew and baseball to become college's top sport (Oriard, 2012). It was during this time that unofficial governance rules were put in place to provide a sense of equitable playing rules. Students participating could only participate for four years, restricted to only full-time undergraduates who were in good academic standing and pursuing a degree. These rules were monitored by the individual institutions in the earliest days due to a lack of universal governance.

By the 1890s, football had developed into an extremely violent game. Over the next 15 years, due to the exploitation of violence within the game fueled by newspapers, college football violence had grown wildly out of control (Kirkpatrick, 2012; Oriard, 2012). In 1905, President Roosevelt stepped in to create an organization which would oversee the safety and conduct of the sport. This organization became the National Collegiate Athletic Association. It did not take long for the NCAA to implement rules changes which included the legalization of the forward pass in 1906 and an official policy on eligibility, which required all participants to be enrolled in a full course load under the college that they were representing (Oriard, 2012). Without a significant buy-in, the NCAA struggled to gain footing over the next half century yet continued to make recommendations to colleges for self-governance on rules related to eligibility, transfer students, and participation during conventions in 1922 and 1940. At the NCAA convention in 1922, a ten-point code was adopted to provide an update on the 1906 policy on academic eligibility. This code focused on eligibility, specifically noting that freshman and graduate students were ineligible for competition and participation would be limited to three years. A few years later an analysis of the student-athlete during the 1920s revealed that there was very little difference in academic achievement compared to their non-athlete peers (Savage et al., 1929). The 1930s brought with it challenges in policing professionalism, as southern schools approved scholarships, while schools in the Pacific Coast and Big Ten Conferences provided jobs to student-athletes through alumni. The legitimacy of these jobs was debatable and brought forth criticism from the southern schools. Taking note, the NCAA decided to take on enforcement to have a standard for the means of compensation. Though this took effect in 1940, it was not until 1948 when the NCAA would finally enforce legislation, where it took a stand and banned

financial aid for athletic ability. This first major attempt at enforcement was through legislation known as the "Sanity Code" (Oriard, 2012; Thelin, 1996).

NCAA policy legislation: formation and enforcement. The Sanity Code, also known as "The Principled for the Conduct of Intercollegiate Athletics", was an extension of prior foundational principles dating back to the original 1906 convention, and the adaptation to those initial principles in 1922. The Sanity Code made a few slight adjustments which limited participation to three years and also prevented financial aid to be awarded for athletic ability (Oriard, 2012; Thelin, 1996). The NCAA moved to expel six colleges for a violation of The Sanity Code, but because aid for participation had already been a widespread practice by the membership institutions, there was overall refusal. The Sanity Code failure needed reevaluation and the NCAA worked on developing new legislation. In 1952, the NCAA came back with a 12-point code which was amended from a 10-point code developed in the 1922 convention. This new code covered three main themes: an initial eligibility for incoming students, academic progress for continuing students, and graduation.

Though the Sanity Code ultimately failed in its ability to hold membership schools to a uniform code, the NCAA drew inspiration from policy developed at the conference level. It was at the conference level where the implementation of policy based on predictive measures (policy implemented which predicted a certain college GPA from high school performance) was used to award athletic aid as well as determining initial and continuing eligibility for student-athletes. The Atlantic Coast Conference used SAT scores as early as 1960, using a cut-score of 750 to be deemed athletically eligible (Covell, 2012; Kirkpatrick, 2012). The ACC also enforced a minimum grade point average (GPA) throughout a student's college career to maintain his eligibility. The Big Ten Conference followed suit of the ACC, as they developed a 1.7 GPA

predictor scale for incoming students which was required to receive athletic financial aid (Covell, 2012; Kirkpatrick, 2012). The NCAA used this model to create their first predictive legislation with the 1.6 rule, or "predictor rule", to enforce uniform standards of the membership institutions in regards to eligibility and academic standards for incoming students. This policy would require students to have a "predictive GPA" of 1.6 on a 4.0 scale based on high school GPA and SAT/ACT scores in order to receive athletic based financial aid.

Predictive and non-predictive legislation. With the Big Ten and Atlantic Coast Conferences implementing policies which predicted academic success and graduation, the NCAA seemingly found inspiration for developing and implementing policy under this new paradigm. At this point in their existence, the NCAA had established themselves as what Aldrich (2008) describes as a linking-pin organization. The description below highlights the three necessary tenants of a linking-pin organization, of which, the NCAA checks all three:

> They serve as communication channels between organizations, typically through contact between boundary-spanning personnel, they provide general services linking other organizations to one another by transferring information and resources from one part of a network to another, and they serve as models to be imitated by others, or use the dependence of others on themselves to direct the activities of the action sets and organizations. (Aldrich, 2008, p. 329)

Linking-pin organizations have the ability to strengthen their organizational control with large membership and significant inter-organizational communication. Their rise to power during this time could be partially explained through Aldrich's (2008) explanation of the population ecology model which identifies the ideal that "organizational forms are positively selected if they adopt forms that will give them a relative advantage over existing forms, or if they happen onto a niche

not yet occupied" (p. 329). During this time, the only competition for governance was at the conference level. If the NCAA could centralize policy enforcement from the conference model to one overarching model, it could make governing policy easier for the members of the conferences. Through applying very similar ideals to those of the conference, it would follow that a rise to power would not be difficult with enough conferences buying in. Though it is very bold assertion that this was the definitive action which helped the NCAA begin its rise to greater power, it does provide the context for how the linking-pin organization could have gained traction in being the centralized governance agency of intercollegiate sport. This new model of implementing predictive policy would forever change the landscape of NCAA by converting to empirical data-driven backing of new legislation. This type of legislation holds great value when objectively evaluating and predicting the chance of academic success, and graduation, for any specific individual.

The 1.6 rule, or predictor rule, would eventually be phased out for a very controversial non-predictive 2.0 rule at the 1973 NCAA convention which Oriard (2012) contended, "… fundamentally redefined student-athletes as athlete-students" (p. 11). The reasons why the 1.6 rule was abandoned was for two reasons: standardized test scores had questionable validity and it posed as a barrier to access for disenfranchised groups. Practically speaking, it limited coaches in recruitment, which gave footing to developing an initial eligibility policy which would grant access to a greater pool of student-athletes. By replacing the 1.6 rule with a standard 2.0 high school GPA, the NCAA reasoned that it could satisfy both of those issues. The new standard would essentially open the floodgates into intercollegiate athletics for the masses. With the legislation coming on the heels of the nation's desegregation movement in education as a result of *Brown vs. Board of Education* and the Civil Rights Acts of 1964, access to higher education

became extremely feasible for many disenfranchised groups, especially Black students. The 2.0 rule deviated from the previous predictive policies and had many fundamental flaws. The main deficiencies were consistency of American high schools *and* that the policy was not grounded in predictive success data. Academic rigor was not consistent from one town to the next and as a result, there were many students admitted to college as a result of the 2.0 rule that were academically high-risk who were not likely to earn a college degree. It was not long before the NCAA had a national crisis with membership institutions. Graduation rates plummeted across sports and the student-athlete academic incoming SAT scores and GPAs fell below national non-athlete levels (Eitzen, 1987). National scandals broke out in college athletics. Among the more alarming impacts of the 2.0 rule were three public cases of student-athlete illiteracy during the early 1980s. Kevin Ross, Chris Washburn, and Dexter Manley became household names with their testimony in front of Congress, where each tearfully admitted they were functionally illiterate and had participated in intercollegiate athletics (Oriard, 2012).

In the following years, the NCAA reverted back to using predictive success metrics for athletic aid and participation as a result of the disastrous results related to the 2.0 rule. At the 1983 convention, Proposition 48 was approved, which created an initial eligibility high school GPA in 11 core classes and SAT cut-score of 700. Reverting to predictive measures meant that Blacks were disproportionately impacted by the raised standards (Oriard, 2012). This double-edged sword was a great means of access to higher education for many Black students who previously would not have met the criteria for the 1.6 legislation, but the new raised stakes had a disproportionate impact on this group as many who were admitted under the 2.0 legislation were woefully underprepared for the rigors of a college education in addition to balancing athletic commitments. Upon Proposition 48's implementation, the Black Coaches Association and

HBCUs brought forth opposition that the new policy disparately impacted minority and poorer students (Gurney et al., 2016). This followed with the passing of Proposition 16 in 1992, which created a sliding scale for GPA and SAT scores for initial eligibility. Proposition 16's sliding scale became a much more accurate predictor of college achievement as GPA in high school core classes rather than overall high school GPA was found to be two to three times better more predictive than standardized test scores. The 700 cut-score on the SAT was also found to not be an effective measure of college success (Petr & McArdle, 2012). The NCAA developed the initial eligibility clearinghouse in 1994, which later changed its name to the NCAA Eligibility Center (NEC). The NEC would begin gathering and analyzing data on over 100,000 students each year while creating an annual longitudinal dataset. Petr and McArdle (2012) called this data "the best we are aware of in higher education" (p. 30). This data would ultimately lead to the formation of the APP and APR in 2003, which is the metric currently used by the NCAA to evaluate real-time academic success.

The Academic Performance Program and NCAA Academic Reform

The Knight Commission on Intercollegiate Athletics was formed in 1989 by John and James Knight in response to a decade of high profile academic shortcomings in college athletics, such as the high-profile instances of academic negligence related to students enrolling in college without the basic skill fundamentals of being able to read and write (Gurney et al., 2016; Oriard, 2012). The goal of the commission was simple: to "recommend a reform agenda that emphasized academic values in an arena where commercialization of college sports often overshadowed the underlying goals of higher education." (Knight Foundation Commission, 2016, para 3). Today the Knight Foundation finds itself as one of the most influential groups on intercollegiate athletics outside of the NCAA. Its membership includes some of the most respected college

presidents in the country, former high-profile student-athletes, conference commissioners, and the former United States Secretary of Education, Arne Duncan.

In June of 2001, the Knight Foundation Commission on Intercollegiate Athletics published "A Call to Action: Reconnecting College Sports and Higher Education". The report outlined major issues in intercollegiate athletics that threatened the mission and values of post-secondary institutions. This report called for greater fiscal responsibility in wake of the continued athletics arms race, and need for academic integrity to be upheld at the institution level. Specifically, the report called for teams to have graduation rates of at least 50% to be eligible for postseason competition (Kirkpatrick, 2012, Knight Foundation Commission, 2010). In August of that same year, the NCAA Division I Board of Directors created an eight-member task force led by Rutgers President Francis Lawrence to focus on reform related to fiscal and academic integrity among the membership schools (NCAA, 2015b). It was at this time that the NCAA Board of Directors adopted a new, more comprehensive means of approaching academic reform as a mandate presented by the NCAA. In this new adaptation, the NCAA mandated, creating "a system that will produce improved graduation performance, particularly in the specific high-profile sports, without having a disparate impact on ethnic minorities" (Harrison, 2012, p. 66). This would come to be known as the Academic Performance Program, and give birth to the APR metric – one of two metrics to evaluate academic success under the APP.

The APP was primarily implemented as a means to address two sports, men's basketball and football, though it has been applied to measuring the success of all intercollegiate sports. These sports drew considerable criticism for their inability to graduate many student-athletes, especially during the 1980s and 1990s (Harrison, 2012; Oriard, 2012). Among the guiding principles in the academic reform were the following: (a) using data-based decisions for design,

(b) learning and revising as appropriate based on experience during implementation, and (c) systematically evaluating after a suitable period of operating experience and revising as appropriate (Harrison, 2012). Two years later, Harrison (2012) identified a salient concern with the design of the study which is an inherent concern for the design of the program:

> Data analysis during the design stage of this system also revealed that low-resource and Historically Black Colleges and Universities (HBCUs) would likely be more heavily impacted than would other institutions. The response was implementation of a set of *mission filters* that would provide relief from penalties, particularly in the early years of operation of the APP. The filters were based on factors such as resource level of the institution, academic characteristics of the institution, comparison within a specific sport group, and demonstrated APR improvement over time. (p. 71)

Though this concern was merited at the time, a set of proposed filters could be applied to certain subsets of schools, mainly those classified as HBCU and Limited Resource Institutions, knowing that a future revision to the policy would be on the horizon. The result was the newest academic reform by the NCAA in over 10 years - the APP. Two years later the NCAA implemented the APP and began collecting data according to new metrics on the 2003-2004 academic year. Next, I will take a look at the two metric that comprise the APP: the Graduation Success Rate (GSR) and very briefly, the Academic Progress Rate (APR). Within the context of this study, the GSR does not have significant bearing on the outcomes related to the APR impact on HBCUs, though it is part of the APP.

Graduation Success Rate (GSR). The Graduation Success Rate, is the evaluation of six-year graduation of scholarship athletes which are broken down into annual cohorts. The GSR was developed in 2005, and collected data on students dating back to 1995. The impetus for

developing the GSR was to create a better metric of evaluating six-year degree achievement than the Federal Graduation Rates (FGR), which does not account for transfer students, mid-year enrollees, and non-scholarship athletes at schools that did not offer athletic-based aid, and students who leave a school in good academic standing, when calculating graduation rates. As a result, the FGR reports a much lower percentage of degree attainment than the GSR, which the NCAA argued is a more accurate metric for evaluating true degree attainment (Brown, 2014; Petr & Paskus, 2012). The GSR correlates highly with the other metric under the APP, the Academic Progress Rate.

The GSR has drawn considerable criticism from academic support professionals and scholars alike. The main criticism, outlined by Gurney and Southall (2012) is the idea of a "bait and switch", which they claim skew the graduation rates of programs compared to the FGR (para 16). In this argument, Gurney and Southall (2012) contend that because the metric allows for adjustments to be made on behalf of students who leave universities in academic good standing that there is an inflated graduation rate compared to the FGR. The metric fails to account for the large graduation gaps in men's football and men's basketball programs which highlight significant negative graduation gaps, which in some cases can reflect 30% and 40% differentials to the general student population at Power 5 institutions (Gurney & Southall, 2012; Gurney et al., 2016; Harper, 2006; Harper et al., 2013) The differential between the two metrics has fluctuated between 15 and 20% in favor of the GSR (Gurney & Southall, 2012).

The one thing that the FGR and GSR are limited by is the six-year graduation metric (Brown, 2014). As college prices continue to rise, a significant portion of students have challenges financing an education. Stopping out is an option that many must take in order to finance their education which can push past the six-year capture. With stopping-out for student-

athletes, it impacts their overall eligibility cycles, as they are on a five-year clock to use four years of eligibility in NCAA Division I competition. As there are a higher percentage of students at HBCUs who are Pell eligible, this population may suffer the most from these circumstances.

Academic Progress Rate (APR). For the purpose of this study, I focused predominantly on the APR impact on HBCUs and non-HBCUs with similar resource levels. There are two main eras within the history of the APR: initial implementation (2003-2004) to 2011, and the APR penalty adjustment of 2011 to present day. The Academic Progress Rate determines individual team academic success by calculating a rate predicated upon retention and academic good standing. Calculating APR for any one of the 6,400 Division I sports teams is a tally of two items for every scholarship athlete on a team's roster. The first item is student-athlete eligibility. The second is related to student retention and tracks a student's attendance on a semester basis. All scholarship athletes can earn a maximum two points in each academic semester.

Under the APP, eligibility is determined by meeting Progress-Toward-Degree (PTD) requirements. A student is considered "eligible" if she successfully satisfies all facets of the PTD requirements: minimum grade point average (GPA) standards required for graduation, full-time enrollment at a certified membership institution, minimum semester and annual credit hour required achievement, and percentage of degree completion benchmarks (NCAA, 2015a).

The NCAA (2015) specifies that students must achieve 90% of the required GPA required for graduation entering her second year, 95% when entering her third year, and 100% when entering her fourth year. If an institution's graduation GPA requirement is 2.0, a student going into her second year would therefore need a 1.8 cumulative GPA, 1.9 cumulative GPA when entering her third year, and 2.0 entering her fourth year per NCAA bylaw 14.4.3.3 (NCAA, 2015a).

Full-time enrollment is determined by the host institution for a student, usually a minimum of 12 semester hours. 24 semester credit hours are required to be earned by a student in a calendar year, 18 semester credit hours are required to be earned by a student between the fall and spring semesters, and six semester credits hours are required to be considered eligible for competition in sport per NCAA bylaw 14.4.3.1 (NCAA, 2015a).

The last component of eligibility is fulfillment of percentage of degree requirements. A student entering his third year of collegiate enrollment must complete 40% of the required coursework for said student's specific degree program, 60% when entering his fourth year, and 80% is required for a student entering his fifth year of school per NCAA bylaw 14.4.3.2 (NCAA, 2015a).

Should a student be deemed eligible and is also retained at the end of the fall semester, that student would earn two points out of a possible two points, a "two-for-two". The process is repeated again in the spring semester. At the end of the academic year, all the scholarship athletes on a given team have their points tallied and divided by the total number of possible points. That score is then multiplied by 1000 for the team's APR rate. That annual rate is combined with the three prior year's annual rates to determine a four-year APR score. Teams must have a four-year APR score of 930 to avoid academic sanctions and be deemed in good standing. The 930 score was chosen because it predicts a 50% Graduate Success Rate, which is a graduation rate of approximately half of a team's scholarship athletes in a six-year period (Paskus, 2012).

The APR has been a lightning rod of controversy from its very origins. As the metric was the first means of evaluating academic progress for a real-time assessment of institutional effectiveness, the outcomes of the program have shed light of a perceived disparate impact.

Walter Harrison, the architect of the APR admitted that the issues with the metric and the APP as a whole have haunted him for years, as wealthier institutions have used means of summer school, waivers, and additional exceptions to game the system (Gurney & Southall, 2012). Harrison (2012) and Paskus (2012) identified the characteristics of institutions which would have the greatest challenges with the metric, which were inclusive of resource level, mission, academic profile, support services, administrative turnover, and contest schedule. Additionally, Johnson et al. (2012), found that gender was an additional characteristic of challenge, as men's sports – especially revenue producing sports – were at greater risk for not meeting the minimum benchmarks set forth by the NCAA which predict a 50% graduation rate. Christy et al. (2008) and Kirkpatrick (2012) conducted surveys which focused on perceptions of the impact of the APR metric, and both found that there was great concern among membership institutions, especially LRI institutions, that the metric would have a negative impact on their wellbeing. Perhaps the most scathing evaluation of the APP argued that it had a disparate impact on HBCUs and was ultimately racist by design (Blackman, 2008).

To better frame this criticism, the next section of this chapter will describe the two main phases of the APR and the outcomes and penalty impact on institutions during these periods.

Implementation 2003 - 2011

The Academic Progress Rate has been through two main phases. The first of phase is roughly translated as the launch of the program in 2003, to 2011. The NCAA collected data for the APR first time at the conclusion of the 2003-2004 academic year. This policy, which is rooted in predictive methodology, aligns with the NCAA's mission to graduate students, which according to the NCAA "is the ultimate goal" (NCAA, 2015d, para 1). The greatest challenge during this time was that the APR measurement was based on a four-year average of a school's

annual retention and eligibility calculation. Because it would take several years for the program to be fully functional, two different sets of penalties were imposed during this time - historical and contemporaneous. The historical penalty would be applied to any school yielding an annual APR rate of less than 900, as during this time, a squad score of 900 predicted 50% graduation rate. This rate would later change to 925 in 2005 and 930 in 2011 as those numbers were found to be predictive of 50% graduation through analysis of the data during that time period (Harrison, 2012; Paskus, 2012; Petr and McArdle, 2012). During the first few years, men's basketball, football, and baseball were the sports of greatest interest, as the three collectively fell below the national APR averages (Paskus, 2012). Over time, baseball APR rates began to climb and by 2011 it became a sport with very few sanctions. It was in these first few years that many schools struggled to meet the NCAA's demands for the 900 preferred rate. As years ticked by, it became apparent that it was not only men's basketball and football who were recipients of the majority of APR penalties, it was also institutions with Limited Resources and who fell into the HBCU category.

As a result, the NCAA utilized filters for HBCUs to account for lower scores, and would consider improvement in annual scores in lieu of a penalty for that year. In 2011, though, the APP would be reevaluated by the NCAA board of directors, and an adjustment would be implemented which would make reaching the standard more difficult on HBCUS and LRIs.

2011 – 2015 (Focus of Study)

The 2011 Presidential retreat led by NCAA president Mark Emmert led to significant changes within the APR structure. The first major change was the APR penalty benchmark, which increased from 925 to 930 (Hosick, 2011a). The new 930 mark became the newest predictor of a 50% graduation rate. The change also separated the post-season eligibility from the

penalty structure. Any institution that now fell below the 930 multi-year mark would be ineligible for post-season competition starting in the 2014-2015 academic year. With the new markers having a significant impact on HBCUs and LRIs, there was a grace period for these colleges and universities to allow for a smooth transition to the new requirements. These institutions were given until 2016-2017 to meet the 930 mark (NCAA, 2015b).

The five-year span between the 2010-2011 and 2014-2015 academic years saw incredible improvement by many programs. The NCAA reports that the overall number of academic penalties continues to diminish with every year. On top of the reduction of penalties, over 14,000 former student-athletes returned to school to earn their degrees (Hosick, 2016c). Though these improvements shed light on very positive trends, one concerning trend still remains: the disproportionate impact of the APR policy on HBCUs and LRIs.

2015 - Current

On April 20, 2016, the National Collegiate Athletic Association (NCAA) released the 2015-2016 Academic Progress Rate (APR) annual report. Due to insufficient APR scores, 23 teams from different institutions were considered ineligible to compete in post-season competition in the 2016-2017 academic year. Aside from the postseason bans, 31 additional teams also served a series of level I, II, and III penalties for their failure to meet annual academic benchmarks such as a reduction in weekly practice time to be replaced with academic activities (Harrison, 2012). As mentioned in Chapter 1, penalties range in reduction of practice time at level I, to scholarship reduction in level III. These penalties harshen in severity related to how many consecutive years the program falls below the targeted academic benchmarks. The release highlighted significant progress made collectively from NCAA Division I member institutions, especially in sports like men's and women's basketball and football, all of which added three

points to their national APR averages. These sports have historically had lower APR scores than most non-revenue generating sports and lower Federal Graduation Rates than the national average (Petr & Paskus, 2009).

The second highlight of the release drew focus to even greater gains made by HBCUs. The single-year APR rate for institutions in these categories climbed almost 40 points in five years, or a 4% change. Though a 4% change may seem significant, the overall change is the difference for these colleges and universities is substantial, as in many cases it is the difference between recipients of an academic sanction by the NCAA to a score which places them in a safe harbor.

The improvement made by HBCUs was so significant that it warranted a corresponding release from the NCAA (2016d) which highlighted certain colleges and universities that have made the greatest gains, including North Carolina Central, which earned several perfect APR scores after having a litany of scores in the 800s and low 900s as recent as the 2008-2009 academic year.

Disparity Concerns amongst HBCUs and Limited Resource Institutions

While this growth is undoubtedly positive for the NCAA membership, there continues to be one facet of the annual APR release that is cause for concern. Of the 31 individual team infractions penalized by a NCAA sanction, 29 were teams belonging to colleges and universities in two conferences: the MEAC and the SWAC. These two conferences are the only two Historically Black Conferences in Division I and many of their member institutions have faced annual scrutiny for their collective lack of ability to meet the NCAA APR rates since the introduction of the four-year penalties in the 2007-2008 academic years. Noticeably absent from academic sanctions during the last two years is any team from what is known as the “Power 5”

Conference (SEC or Southeastern Conference, Big Ten Conference, Big 12 Conference, ACC or Atlantic Coast Conference, and the Pac 12 or Pacific Coast Conference). These conferences have the power to make autonomous decisions in conjunction with the NCAA to govern themselves (NCAA, 2014b) and have significant resources that they invest in their athletic department operations (USA Today, 2016). Though the colleges and universities in these conferences do have the power to propose new legislation through their respective conference offices, they do not have the power to opt out of the APP. Whether or not they do may be of little significance as these institutions have had no issue in successfully navigating the APP.

Gaps in Literature

There is no shortage of topics to write about when considering an evaluation of the NCAA Academic Performance Program. The goals of this study are not to analyze the Graduation Success Rate, which is a complementary metric to the APR, nor does this dissertation seek to evaluate the NCAA's initial eligibility policies, which certainly can have a future impact on the APR rates, especially when considering admitting student-athletes with lower academic profiles. This study also does not attempt to measure academic reputations of Division I membership institutions. Each of these topics have their own merit and significance as research topics.

This study seeks to conduct a policy review of the APR metric and its impact on a certain classification of membership schools as it addresses the gap of the significant absence of empirical research conducted on the topic to date. This topic has not had a significant amount of empirical scholarly research attention since the implementation of the APP launched in 2003-2004, and as a result, this dissertation seeks to address many of the voids which currently exist on the topic. There have been four scholarly writings of significance which have critically

analyzed the impact of the APR on NCAA membership during from inception to current day. Though each has provided a better understanding of the impact of the metric, along with predictive variables of penalties, there are shortcomings in each which are addressed in this study.

Blackman (2008) focused on the unlawful nature of the program in drawing comparisons to Proposition 16, an NCAA policy which legally was ruled to have a disparate impact on Black student-athletes during the mid-1990s as a result of an increase in the required core classes required for athletic aid during the initial eligibility period. To date, the APP has not been found unlawful nor to have a disparate impact on Black student-athletes. Proposition 16 also introduced a "sliding scale" where a student's SAT score and GPA were used to determine eligibility for competition (Blackman, 2008, p. 228). This had the greatest negative impact on students of color, specifically Black males, while having negligible impact on White students entering college during the mid-90s (Mondello & Abernethy, 2000). Blackman (2008) posited that the APP, specifically the APR metric, would have a "disproportionate impact" on HBCUs and African-American males (2008, p. 228). Blackman's (2008) analysis of the NCAA impact on HBCUs only limitation has been the timing of his study, which occurred during the earlier stages of implementation when the disparate trends had not fully emerged to the extent that they have been present since 2010-2011. His analysis of penalties imposed makes use of the 2006-2007 APR publications and NCAA response to membership scores. This unfortunately leaves a full decade of unanalyzed APR scores, which gradually show a growing percentage of sanctions imposed on HBCUs compared to peer institutions, including the 2015-2016 APR results, which were nearly entirely imposed upon HBCUs (Hosick, 2016c).

The next two empirical studies came in the form of surveys administered to membership schools. The original study by Christy, Seifried, and Pastore (2008) surveyed membership schools in the Power 5 and the Big East conferences on their perceptions of the impact of the APR. Christy et al.'s (2008) findings largely supported a favorable impact, though the survey overlooked the conferences who were receiving the lion's share of penalties during that time. The survey also was only administered to coaches and upper-level athletic administrators, and left out academic support staff who have the closest dealings with student-athletes related to their academic pursuits. This study was adapted and used by Kirkpatrick (2012) to focus on the perceptions of impact among schools who fell into the limited resource category. Kirkpatrick expanded his sample as he sent to academic support staff. Kirkpatrick (2012) found that many institutions who were recipients of penalties felt the APR metric would have a negative overall impact on membership. The two studies have significant shortcomings. Both studies are currently very dated, with Kirkpatrick's study making use of data from the 2010-2011 academic year, and the study conducted by Christy et al.'s (2008) study is now a decade old. Kirkpatrick's (2012) study also only looked at schools who fell into the LRI category, which does include HBCUs, but the main focus is related to resources rather than race.

The last, and most similar in nature to this study, focused on identifying a mix of student-level and institutional-level variables which are predictive of APR penalties (Johnson et al, 2012). Johnson's study, though extremely thorough in nature was conducted at a singular institution in the Midwest and focused on data available between 2005-2006 and 2009-2010. This study's findings are dated and ultimately could have used a greater sample of institutions to be generalizable to a larger population of institutions.

This study will advance these prior studies by positioning its focus both on the historical impact of the APR along with current impact of the policy according to resource and mission. In the upcoming chapters, I provide the statistical analysis which present significant findings that the APR metric has had a disparate impact not only on Limited Resource Institutions but Historically Black Colleges and Universities.

Chapter 3: Research Design, Data, and Methods

Overview

In Chapter 3, I detail the methodology and research design which provides the necessary data and statistical analysis to inform my research question posed in chapter one. I begin the chapter by briefly revisiting salient components from Chapter 1, such as the problem statement, research questions, and terminology. After this summary, I explore the research design, population and sample, and the means by which the data is collected and analyzed.

Problem Statement

Since the implementation of the Academic Performance Program by the NCAA in the 2003-2004 academic year, the Academic Progress Rate has drawn considerable criticism for its apparent disproportionate impact on Historically Black Colleges and Universities (Blackman, 2008; Carter, 2016; Grasgreen, 2013; Jackson, 2016; Khurshudyan, 2015). Specifically, HBCUs have accrued a significant portion of academic sanctions as a result of low multi-year APR scores (Hosick, 2011b; Hosick; 2016c; Moltz, 2011). Table 2, shown below, breaks down the distribution of NCAA APR penalties to men's sports by athletic conference during the 2010-2011 to 2014-2015 time period. Women's sports were not included in this study as Johnson et al. (2012) found gender (men) to be significant as a predictor of penalty. There were also not a substantial amount of overall women's penalties (37) during the 2010-2011 to 2014-2015 period

to support a regression analysis. It should be noted, however, that of the 37 penalties imposed on women's sports (compared to over 150 for men's sports), *only* six (16%) went to non-HBCU institutions. Highlighted by the highest total penalties, are the two HBCU conferences, the Southwestern and Mid-Eastern Athletic Conferences.

Table 2
NCAA APR Penalties by Conference for Men's Sports 2010-2011 to 2014-2015

Conference	Level I	Level II	Level III	Total
American East (non-football)	1	-	-	1
Atlantic Sun	3	-	-	3
Big East	1	-	-	1
Big Sky	3	-	-	3
Big South	4	3	-	7
Big West (non-football)	2	-	-	2
Colonial	3	-	-	3
Conference USA	4	1	-	5
Horizon League (non-football)	1	-	-	1
Mid-American Conference	1	1	-	2
MEAC*	30	11	7	48
Missouri Valley	-	-	-	0
Mountain West	1	-	-	1
Northeast (non-football)	3	-	-	3
Ohio Valley	1	-	-	1
Southern	1	-	-	1
Southland	6	1	2	9
SWAC*	17	19	16	52
Summit (non-football)	-	-	-	0
Sunbelt	3	-	2	5
Western Athletic	5	-	-	5
Independent	1	-	-	1

Note: * = HBCU conferences. The table is not inclusive of the Power 5 conferences (Atlantic Coast Conference, Big Ten Conference, Big 12 Conference, Pac Twelve Conference, Southeastern Conference) which collectively amassed zero penalties during the 2010-2011 to 2014-2015 time period

The academic sanctions signify increasing levels of "punishment" or corrective actions imposed on an institution by the NCAA. It is important to note that sanctions are not levied onto the institution as a whole, but the specific sport program which triggered the academic sanction, such as the men's golf team or the women's tennis team. Though a specific athletic program like

a men's golf team does earn a penalty, the institution sponsoring the program does receive public reprimand by the NCAA. The penalties range in severity from reduced practice time in level I, in which the hours are substituted for academic related activities, to loss of scholarships in level III. Level III is considered the harshest level of penalty, and is the precursor for a program being shut down should the patterns of poor academic progress continue.

The most recent years of academic sanctions paint a concerning picture of the distribution of APR sanctions. As a result of the performance of NCAA Division I membership schools in the 2013-2014 academic year, 11 of the 16 schools who received APR sanctions were HBCUs. The total number sanctions resulted in 15 of the 21 (71%) issued to the HBCU group. The 2014-2015 academic year reflected nine of the 10 institutions sanctioned as HBCUs. These colleges and universities received 30 of 31 (96%) total sanctions that year (NCAA, 2010). Table 3 shown below, shows a comprehensive tally of the penalties accrued during the five-year (2010-2011 to 2014-2015) period used in this study between HBCU and non-HBCU colleges and universities.

Table 3

NCAA APR Penalties 2010-2011 to 2014-2015 (Men's Sports)

Penalty	HBCU	Non-HBCU
Level I	47	44
Level II	32	6
Level III	23	4
Total	102	54

Note: Penalties include public and private Division I colleges and universities

It is important to note that HBCUs make up approximately 6% of the total NCAA Division I membership. Within the confines of this study, the sample is inclusive of only Division I FCS membership colleges and universities. HBCUs make up roughly 19% of the FCS, or (Division I) Football Championship Subdivision. The FCS differs from the (Division I) FBS, or Football Bowl Subdivision, which is characterized by the wealthiest and largest athletic

departments who are NCAA members. Table 4 identifies the difference in penalties between the FCS categorized colleges and universities.

Table 4
FCS NCAA APR Penalties 2010-2011 to 2014-2015 (Men's Sports)

Penalty	HBCU	Non-HBCU
Level I	47	18
Level II	32	4
Level III	23	2
Total	102	24

Note: Penalties shown are reflective of public and private FCS Division I colleges and universities

This difference in academic sanctions imposed appears to show the existence of disparity between HBCUs and institutions with greater wealth and resources. Though this difference is somewhat expected, a more important question arises of whether PWIs, or for the sake of this study, non-HBCUs, with similar resources are being sanctioned at similar rates to the HBCUs in the MEAC and SWAC conferences. The significance of penalties levied on HBCUs begs the question as to whether or not NCAA policies have a disproportionately adverse impact these institutions. If so, HBCUs may be penalized primarily for having a lack of resources in addition to their core missions which aim to serve poorer and historically academically disenfranchised groups (Khurshudyan, 2015; Office of Civil Rights, 1991). What, then, is the relationship of NCAA policy and legislation with the HBCU compared to non-HBCUs who are similarly resourced? In order to find out, I ran a logistic regression where I identified a variable of interest for my dependent variable, HBCU or non-HBCU (institution type). The regression is centered on the outcome of whether or not colleges and universities earned NCAA APR penalties during a five-year period between 2010-2011 and 2014-2015. The predictive variables include athletic spending, student demographic, and institutional level selectivity variables. If similarly resourced non-HBCUs in Division I show similar punishment rates, it might point in the direction of

resources as being a stronger predictive variable to institutional academic success. If not, it may suggest the mission of the HBCU of access and opportunity for poorer black students to be a strong predictor of penalties. This impact should then be felt the greatest among schools with the greatest percentage participation of black student-athletes, the HBCU. It is quite possible that both mission and resource level are strong predictors of NCAA APR penalties.

Research Question

This dissertation seeks to evaluate the APR program from a policy perspective. Guiding that investigation is one research question, which is rooted in current and historical literature and current dialogue. This question emerged as having profound importance pertinent to the continued dialogue and scholarship related to the NCAA's APP.

1) Are HBCUs disproportionately affected by APR penalties/sanctions relative to other NCAA Division I colleges with similar resources?

Data

The purpose of this study was to assess the equitable nature of the NCAA Academic Progress Rate metric. In order to do so, it was necessary to gather data that was relevant to my research question and to run relevant statistical analyses from which informed inferences could be made. Harrison's (2012) and Paskus' (2012) articles on the APR metric together hinted on the need to assess the current APR. Harrison's (2012) identification of the institutions at greatest risk, the HBCU and LRI, coupled with Paskus' (2012) identification of the variables which were the greatest contributors to APR penalties, helped to provide the direction for this study. These variables include athletic contest schedule, administrative turnover, mission, resources, academic profiles, and support services for student-athletes. In addition to these variables, this study only

considers penalties related to men's programs, as there was not a substantial number of penalties for women's sports during this period (Johnson et al., 2012).

This study includes the variables from Paskus' study (2012) which are quantifiable in nature and accessible through national, public databases. To collect the data, I accessed the following three national, public datasets: the Integrated Postsecondary Education Data System (IPEDS) of the National Center for Education Statistics (NCES), the Knight Commission Athletic & Academic Spending Database for NCAA Division I, and lastly the NCAA Academic Progress Rate (APR) Database of the National Collegiate Athletic Association (NCAA). One of the limitations is that not all of the variables identified by Paskus (2012) are included in the study due to difficulty in gathering quantifiable, publically available data for several variables. In addition to the outcome of NCAA APR level I, II, and III penalties received (collectively "APR penalty"), the dependent variables are percentage Pell Grant recipients and first generation percentage (related to mission), expenditure per student-athlete (related to resources), and acceptance and enroll percentages along with average ACT/SAT score of enrolled students (related to academic profile). This study's independent variable is HBCU or institution type. In order to get the most current view of the problem, I collected data between the 2010-2011 and 2014-2015 academic years to provide a more representative average of each variable than just gathering for a single year. This method accounts for any extreme variability which may have occurred in a single year during this time. This study differentiates itself from earlier studies on the impact of the APR metric which focused on program perceptions prior to 2010 or student-level predictive variables at a single institution (Christy, et al., 2008, Johnson et al., 2012; Kirkpatrick, 2012). There has not yet been a study which has quantitatively assessed the institutional-level outcomes of the APR.

Before presenting further detailed descriptive information related to the chosen variables, I first identify the institutions chosen for the sample.

Sample. The sample for this study included colleges and universities with similar academic and financial profiles. The goal was to include institutions which have a high likelihood of being designated as NCAA LRI classification. As the NCAA does not release a public list of LRI institutions, I categorized FCS public colleges and universities who sponsor football into three categories for comparison to the HBCU group. FCS membership institutions are among the "poorest" institutions in Division I, who sponsor football amongst other varsity-level sports. The reason for not including institutions who did not sponsor football was for parity in spending and also because football is one of the two most sanctioned sports (the other is men's basketball, which all institutions in the sample sponsor). The cutoffs for these three groups are according to average per-capita expenditures in the five-year capture. I further describe this process under the comparison group details. All institutions included are public, NCAA FCS membership institutions. The reason why private institutions were not included in this study was because of accessibility of expenditures data, specifically per-capita expenditures per student-athlete. The three comparison groups are less and including $45,000, less than and including $40,000, and less than and including $35,000 in per-capita student-athlete expenditures over the 2010-2011 to 2014-2015 academic year period. An institution would be included in one, two, or all three of these comparison groups if its five-year expenditure per student-athlete fell at, or below the respective cutoffs. For instance, the College of William and Mary is only included in the $45,000 or less group, as its average expenditures per student-athlete was $41,787.40, while Eastern Illinois is included in all three comparison groups as its average expenditures per student-athlete was $27,443. These cutoffs were selected as a means of comparing to schools

which are LRI or HBCU. Once the three groups were formed, all HBCU institutions in the sample were added in each group to be used as the institution type variable in the regression. The purpose in doing this was for the ability to see how the institution type variable (the variable of interest) interacted with penalty in addition to the other variables according to either HBCU or non-HBCU.

The HBCU institutions combined average per-capita student-athlete spending during the 2010-2011 to 2014-2015 period was $33,373 and the median spending for this group was $33,101.4. Spending varied from as low as Mississippi Valley State University in the SWAC of $18,501, to as high as high as North Carolina A&T University in the MEAC of $52,569. Once the median and mean were determined for the HBCU group, I repeated the process for the likely LRI group. Evidenced by Figure 2 (see below), there is a wide range in spending patterns as there are examples of several schools spending in the $20,000, $30,000 and $40,000 tiers. Table 1 provides the median and mean for the control, the likely LRI benchmark group, and treatment groups to show where the HBCU group falls in relationship to spending.

Table 1 (from Chapter 1)
Per-Capita Expenditure for Student-Athletes

Group	Mean	Median
HBCU	$33,373.84	$33,101.4
Likely LRI	$35,823	$33,426
<45,000k	$34,651.59	$35,074.2
<40,000k	$32,521.08	$32,155.6
<35,000k	$29,797	$29,741.2

Note: Averages are aggregates from eligible public FCS institutions between 2010-2011 and 2014-2015 academic years.

Figure 3
Variation in Expenditures

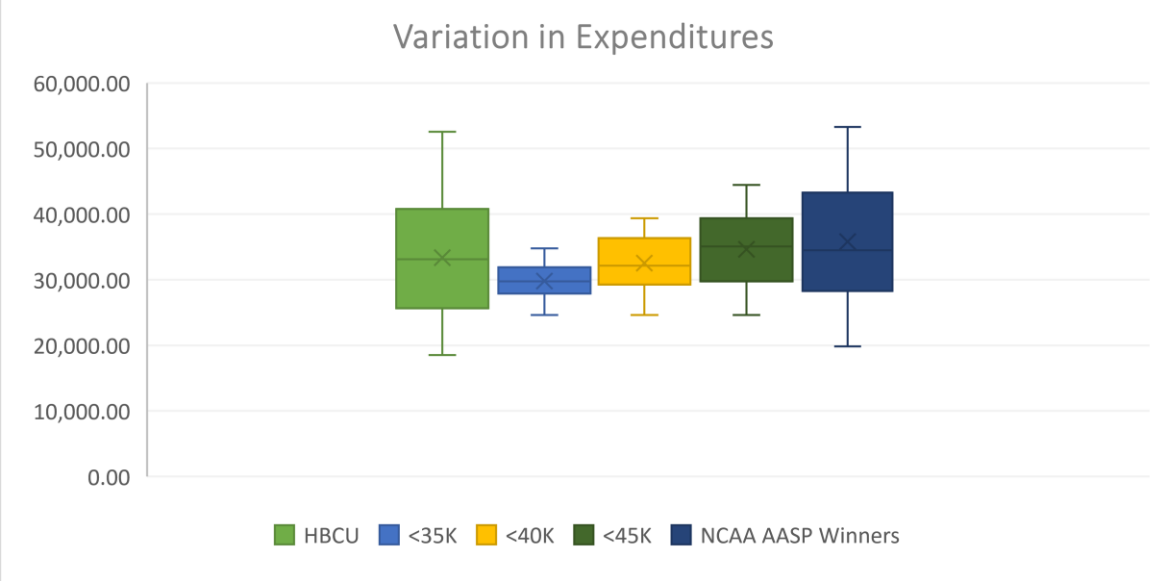
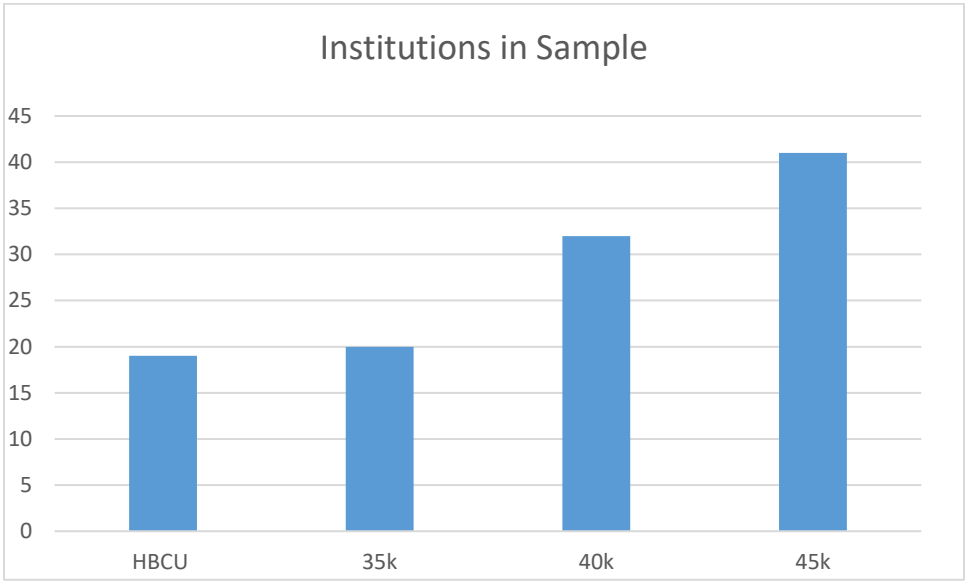


Figure 2 shows the aggregated average expenditures for each group in the sample along with the NCAA AASP Grant winners which are LRI, or institutions in conferences where at least 60% of the colleges and universities are LRI. In short, it will require more than just the AASP to determine a means for quantifying whether or not a group is LRI. In order to have a better barometer for what schools are in the LRI category, I needed to evaluate spending patterns. Spending patterns related to athletics provide a good picture of budgetary constraints and limitations for schools that I evaluated.

Treatment Group. The colleges and universities in the sample are divided into a treatment and three comparison groups. The treatment group, described below, include HBCU institutions from mainly two conferences which are the MEAC and SWAC. Tennessee State University is the only institution included in this group that is not a member of either the SWAC or MEAC, as it resides in the Ohio Valley Conference. The comparison groups are a collection

of non-HBCU likely-LRI public institutions from NCAA FCS classification. The total sample is 60 unique institutions, which is broken down further to 19 HBCU institutions and 41 non-HBCU institutions (at the ≤45,000 sample level). Figure 3 provides a numerical breakdown of institutions by category in the sample.

Figure 4
Institutions in Sample



Note: 35k, 40k, and 45k are the sizes of the comparison groups only

The treatment group for this study are the public HBCU institutions under NCAA FCS classification. The three private HBCUs, Howard University, Bethune-Cookman University, and Hampton University are members of the MEAC conferences and are not included in the sample due to inaccessibility of average expenditures per student-athlete. Additionally, Coppin State and University of Maryland Eastern Shore are not included in the sample as they do not sponsor football. In order to be included in the sample, all schools must sponsor football, as it is the criteria for being included in FCS classification and also a means for establishing consistency and parity in the sample. Football, due to the nature of the size of the team, also is the most expensive sport to sponsor.

Of the 24 HBCUs in NCAA Division I classification only 19 institutions met the criteria for being included in the sample, which is public institutions in FCS. Table 5 identifies the colleges and universities included in the study.

Table 5
HBCUs Included in Sample by Conference

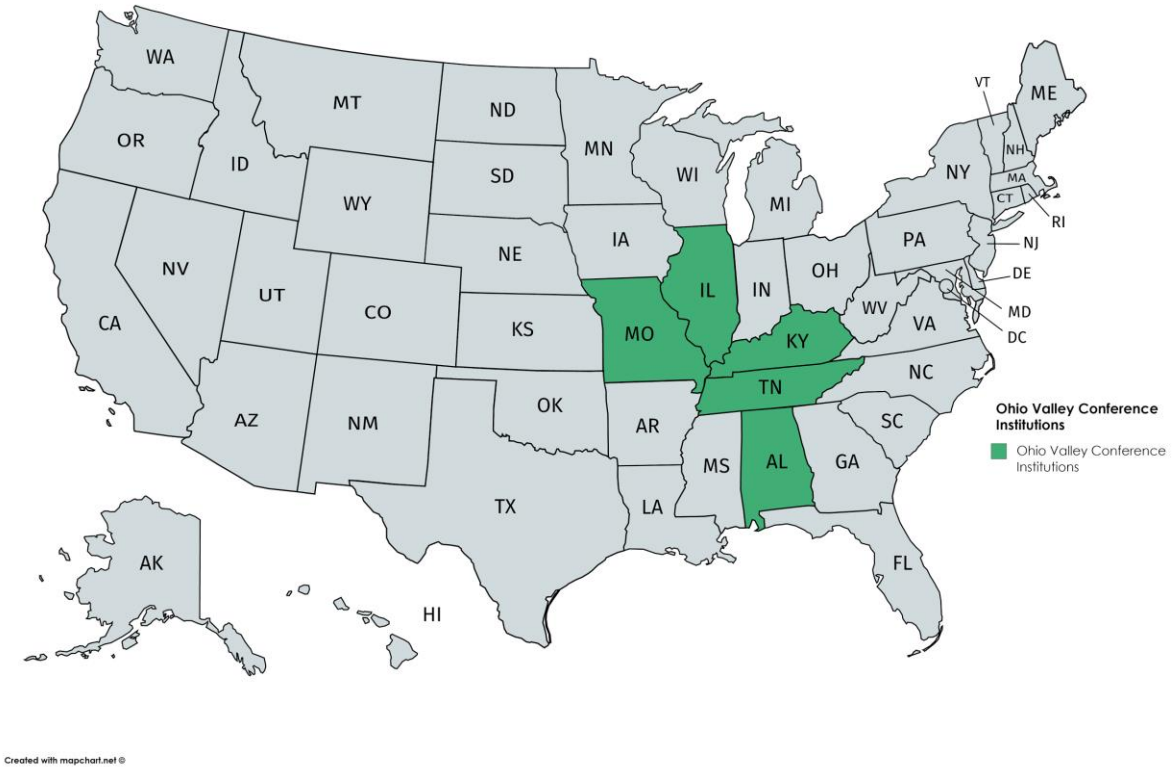
Conference	Included	Not Included
Ohio Valley Conference	Tennessee State University	-
Mid-Eastern Athletic Conference	Delaware State University, Florida A&M University, Morgan State University, Norfolk State University, North Carolina A&T University, North Carolina Central University, Savannah State University, South Carolina State University	Bethune-Cookman University* , Coppin State University †, Hampton University*, Howard University*, University of Maryland Eastern Shore †
Southwestern Athletic Conference	Alabama A&M University, Alabama State University, Alcorn State University, University of Arkansas at Pine Bluff, Grambling State University, Jackson State University, Mississippi Valley State University, Prairie View A&M University, Southern University and A&M College, and Texas Southern University	None

Note: * = private institution, † = no football

In addition to Tennessee State University, the institutions in the Ohio Valley Conference are Austin Peay State University, Belmont University, Eastern Illinois University, Eastern Kentucky University, Jacksonville State University, Morehead State University, Murray State University, Southeast Missouri State University, Southern Illinois University Edwardsville, Tennessee Technological University, and University of Tennessee at Martin. Figure 4 maps the

regional representation of these institutions by state. Many of these colleges and universities are included in the sample and appear in the three comparison groups.

Figure 5
Ohio Valley Conference Institutions by State (Created with mapchart.net)

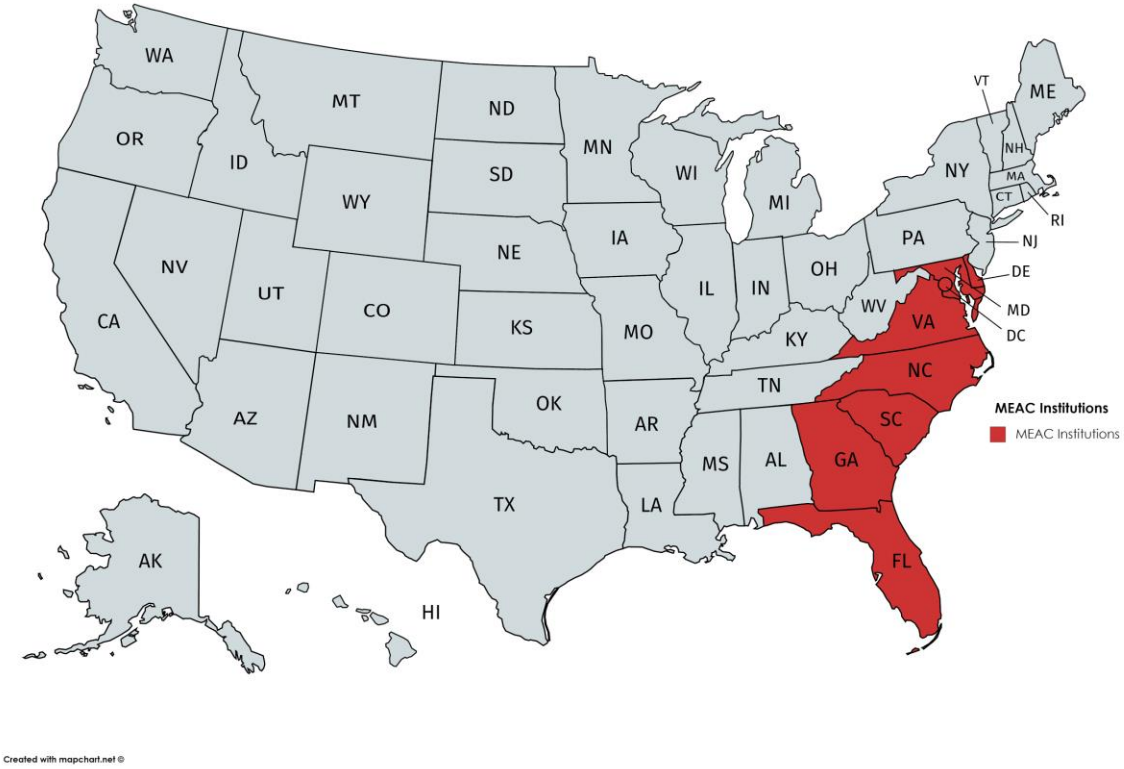


The Mid-Eastern Athletic Conference, or MEAC, has membership from institutions as south as Florida (Florida A&M University and Bethune-Cookman University) and as far north as Delaware (Delaware State University). The remainder of the institutions are found in the states along the Atlantic coastline (MEAC, 2015). The thirteen colleges and universities that are members of the MEAC are Bethune-Cookman University, Coppin State University, Delaware State University, Florida A&M University, Hampton University, Howard University, University of Maryland Eastern Shore, Morgan State University, Norfolk State University, Norfolk State University, North Carolina A&T University, North Carolina Central University, Savannah State University, and South Carolina State University. As mentioned previously, Bethune Cookman

University, Coppin State University, Hampton University, Howard University, and the University of Maryland Eastern Shore are not included in this sample. Figure 5 maps the regional representation of these institutions by state.

Figure 6

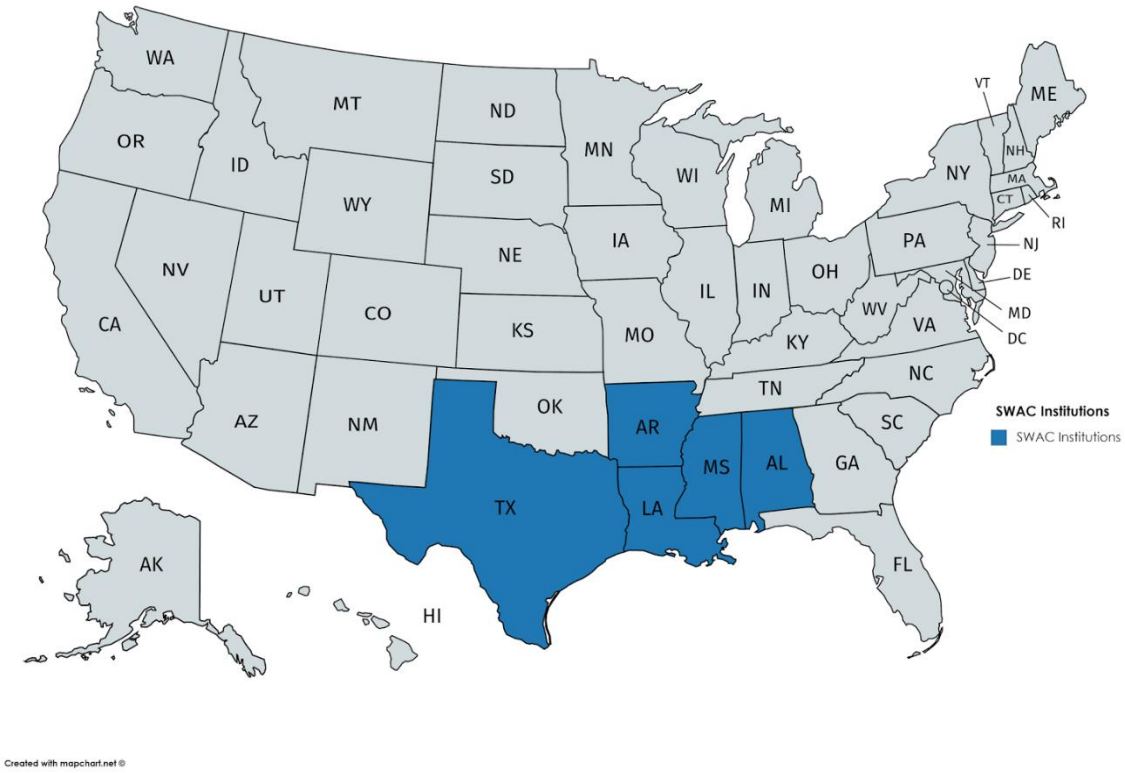
Mid-Eastern Athletic Conference Institutions by State (Created with mapchart.net)



The Southwestern Athletic Conference, or SWAC, and is the older of the two conferences. The SWAC has membership in the Gulf Coast region states with the exception of University of Arkansas at Pine Bluff. The 10 institutions that are members of the SWAC are Alabama A&M University, Alabama State University, Alcorn State University, University of Arkansas at Pine Bluff, Grambling State University, Jackson State University, Mississippi Valley State University, Prairie View A&M University, Southern University and A&M College, and Texas Southern University. All institutions in the SWAC are public and sponsor football and

hence are included in the sample. Figure 6 maps the regional representation of these institutions by state.

Figure 7
Southwestern Athletic Conference Institutions by State (Created with mapchart.net)



Comparison groups. Developing the comparison group for the treatment group predicated on finding a spending metric which would deem the comparison group similarly resourced. To accomplish this I used per-capita student-athlete expenditures data from the Knight Commission Spending Database to determine measures of central tendency for the HBCU group, namely the mean and median. I also created another group which I call the "likely LRI" for comparison purposes, which is all of the public universities to in Division I who have been selected for the NCAA Accelerating Academic Success Program Grant (NCAA, 2015e, NCAA 2018). This is helpful in determining the treatment group as the institutions awarded this

grant are either LRI classified, or are in a conference with 60% of the membership qualifies as a LRI. I then used this descriptive data to determine spending different spending cutoffs for the treatment group. The purpose in doing this was to try to match the spending patterns of the HBCU institutions as a means of declaring them similarly resourced peers. The likely LRI group is solely used for this purpose and was not included in an analysis for this study.

The result of these parameters yielded the 42 institutions from 11 different conferences divided amongst the three comparison groups. The conferences represented are the America East (football plays in Colonial Athletic Association), Big Sky, Big West (football plays in Big Sky), Colonial Athletic Association, Horizon League (football plays in Missouri Valley), Missouri Valley, Northeast, Ohio Valley, Southern, Southland, and Summit League (football plays in Missouri Valley) Conferences. Table 6 categorizes the 42 institutions into the 11 conferences that are in the sample beyond the MEAC and SWAC.

Table 6
FCS Public Colleges and Universities in Sample by Conference

Conference	Institution(s)	Total
America East (Colonial)	University at Albany – SUNY, University of Maine	2
Big Sky Conference	Eastern Washington University, Idaho State University, Northern Arizona University, Southern Utah University, University of Northern Colorado, Weber State University	6
Big West Conference (Big Sky)	California Polytechnic State University – San Luis Obispo	1
Colonial Athletic Association	College of William and Mary, Towson University	2
Horizon League (Missouri Valley)	Youngstown State University	1
Missouri Valley Conference	Illinois State University, Indiana State University, Missouri State University, University of Northern Iowa	4
Northeast Conference	Central Connecticut State University	1
Ohio Valley Conference	Austin Peay State University, Eastern Illinois University, Eastern Kentucky University, Jacksonville State University, Morehead State University, Southeast Missouri State University, Southern Illinois University – Edwardsville,	10

	Tennessee Technological University, The University of Tennessee at Martin	
Southern Conference	Citadel Military College of South Carolina, Virginia Military Institute, Western Carolina University	3
Southland Conference	McNeese State University, Nicholls State University, Northwestern State University of Louisiana, Sam Houston State University, Southeastern Louisiana University, Stephen F. Austin State University, University of Central Arkansas, University of New Orleans	8
Summit League (Missouri Valley)	North Dakota State University, South Dakota State University, University of South Dakota, Western Illinois University	4

Note: The American East, Big West, Horizon League, and Summit League Conferences are not FCS conferences though their football teams do play under FCS classification under the corresponding conference listed in the chart above. These institutions are therefore included in the sample.

Table 7 shows how the 42 institutions are further broken down into the three comparison groups. Table 7 does not show all of the institutions represented in each sample, but rather the comparison group in which they first appear. Institutions represented in the lowest cutoff group, ≤ $35,000, are represented in all three comparison groups while, those which first appear in the ≤ $40,000 group are represented in two groups (≤ $40,000 and ≤ $45,000), and the institutions which first appear in the ≤ $45,000 are only represented in said group.

Table 7

FCS Public Colleges and Universities in Treatment Groups

Treatment Groups	Institutions
≤ $45,000	California Polytechnic State University – San Luis Obispo, College of William and Mary, Idaho State University, Illinois State University, North Dakota State University, Tennessee State University, Towson University, University of Maine, University of Northern Iowa
≤ $40,000	Central Connecticut State University, Citadel Military College of South Carolina, Eastern Kentucky University, Eastern Washington University, Indiana State University, Jacksonville State University, Missouri State

	University, Northern Arizona University, Stephen F. Austin University, University at Albany – SUNY, Weber State University, Youngstown State University
≤ $35,000	Austin Peay State University, Eastern Illinois University, McNeese State University, Morehead State University, Nicholls State University, Northwestern State University of Louisiana, Sam Houston State University, South Dakota State University, Southeast Missouri State University, Southeastern Louisiana University, Southern Illinois University at Edwardsville, Southern Utah University, The University of Tennessee at Martin, University of Central Arkansas, University of New Orleans, University of Northern Colorado, University of South Dakota, Virginia Military Institute, Western Carolina University, Western Illinois University

Note: Institutions which first appear in the ≤ $45,000 are only included in that group, while institutions that first appear in ≤ $40,000 appear in both the ≤ $45,000 and ≤ $40,000 groups. Institutions which first appear in the ≤ $35,000 appear in all three groups.

The "likely LRI" group, though not included in the study, became integral to this study as a barometer for constructing the treatment group, as I wanted to be as accurate as possible in determining LRI institutions for a comparison group to the HBCU control group. As the NCAA does not publicly release the names of LRIs, I gathered the names of institutions who won NCAA Accelerating Academic Success Program single-year and multi-year grants from the NCAA website (NCAA, 2015e, NCAA 2018) and determined the collective average spending for those institutions during the year in which they were selected as a grant recipient. Though it is not explicitly stated by the NCAA, institutions which apply for a multi-year grant are usually in greater financial need, as there is a higher potential financial yield from that grant (up to $900,000 over three years vs. up to $100,000 over one year). It should be noted that institutions can apply for either grant, as long as they are either a LRI or in a conference whose membership

is 60% or greater LRIs. A substantial amount of HBCUs have been recipients of AASP grants. This group includes Jackson State University, Coppin State University, Norfolk State University, Mississippi Valley State University, North Carolina Central University, Alcorn State University, Hampton University, Florida A&M University, Delaware State University, North Carolina A&T State University, Texas Southern University, University of Maryland Eastern Shore, Bethune-Cookman University, and University of Arkansas – Pine Bluff, and Tennessee State University (NCAA, 2015e, 2018). Table 8 identifies the awardees of the AASP grants by type of grant awarded.

Table 8

NCAA Accelerating Academic Success Program Grant Winners

Grant Winners	Multi-Year Grant	Single-Year Grant
Awardees	Alcorn State University, California State University at Bakersfield, California State University at Northridge†, Coppin State University*, Delaware State University*, Florida A&M University*, Hampton University*, Jackson State University*, Mississippi Valley State University*, Morehead State University*, Norfolk State University*, North Carolina A&T State University*, North Carolina Central University*, Northwestern State University, Tennessee State University*, Utah Valley University	Bethune-Cookman University, California State University at Northridge†, Idaho State University†, Saint Peters University, Texas Southern University*, University of Arkansas at Pine Bluff*, University of Maryland Eastern Shore*, University of South Carolina Upstate, University of Texas Rio Grande

Note: * = HBCU, † = Multiple Grants Awarded

Descriptive statistics. Using the Knight Commission database, I was able to determine that the since inception of the grant distribution in 2012, the average expenditure per student-athlete for all public institutions who were selected as recipients of an AASP grant was $36,121.41. When broken down by grant type, the single-year grant recipient averaged $37,101.50 in spending during the year of earning the grant while the multi-year averaged $35,141.33.

It appears as though the best group in terms of parity spending is the ≤$40,000 per-capita student-athlete expenditures group, though I used all three groups to run analyses at the different spending levels to note if the outcomes remain consistent. Though there are certainly institutions who fall into LRI classification who spend more than the determined $40,000, this is a delineation point which kept the sample relatively balanced.

Before moving on to the variables, it is important to emphasize that the HBCU institutions in the sample have been added to each of the comparison subgroups. This allowed for the necessary regression models and comparisons to be made between institution types. Now that the comparison groups have been established, I will identify the variables which will be used in the logistic regression analysis which informs my research question.

Variables

Dependent variable. HBCU, (institution type) is a dichotomous variable. It has been coded using a dummy variable, the 19 HBCU institutions are coded 1, and the 42 non-HBCU institutions are coded 0.

Independent variables. Expenditures per Student-Athlete is a continuous variable. This data was gathered using the Knight Commission on Intercollegiate Athletics' Athletic and Academic Spending database for NCAA Division I. This data was gathered for all public

institutions in the sample by using the Institutional Profile page and the "Trends in Spending and Institutional Funding" data. The variable collected was the Athletic Spending per Athlete. Each school has an aggregated five-year expenditure per student-athlete average using the years 2010-2011 to 2014-2015.

First Generation is a continuous variable. Data was gathered using the College Scorecard Data provided by the United States Department of Education. This data was gathered using the PAR_ED_PCT_1STGEN variable. Each school has an aggregated five-year first-generation attendee percentage average using the years 2010-2011 to 2014-2015.

Pell Grant Recipient Percentage is a continuous variable. Data was gathered using the Integrated Postsecondary Education Data System. Data for this variable was gathered by using Student Financial Aid and Net Price, Student Financial Aid financial aid to all undergraduate students and percent of all undergraduate students awarded Pell grants. Data was gathered for all institutions in the sample. Each school is coded in a dichotomous nature according to a five-year aggregate which averages the annual percentages awarded at said institution from 2010-2011 to 2014-2015.

Undergraduate Acceptance Rate Percentage is continuous variable. Data was gathered using the Integrated Postsecondary Education Data System. Data for this variable was gathered by using "Admission and test scores" Admissions and Test Scores, Number of Applicants, Admissions, and Enrollees, and Applicants total, Admissions total, and Enrolled total, Admissions total. Data was gathered for all institutions in the sample. This was determined by dividing the annual total applicants by total admits for a five-year period. Each institutions' data is five-year aggregate which averages the annual percentages of undergraduates according to race from 2010-2011 to 2014-2015.

Undergraduate Admission Yield Percentage is a continuous variable. Data was gathered using the Integrated Postsecondary Education Data System. Data was gathered for this variable using Admission and test scores, Admissions and Test Scores, Number of Applicants, Admissions, and Enrollees, and Applicants total, Admissions total, Enrolled total. Data was gathered for all institutions in the sample. This was determined by dividing the annual total accepted applicants by total enrollees for a five-year period. Each school's data is five-year aggregate which averages the annual percentages of undergraduates according to yield from 2010-2011 to 2014-2015.

Adjusted ACT/SAT Score is a continuous variable. This variable was computed using a two-step process. I gathered the 25^{th} and 75^{th} percentile scores and averages them to get the averages ACT/SAT scored for each school. I did so through the following steps: I selected Admissions and Test Scores, Admissions and Test Scores, SAT and ACT Test Scores, Percent of First-time Degree/Certificate Seeking Students Submitting SAT Scores, Percent of First-time Degree/Certificate Seeking Students Submitting ACT Scores. Using the Integrated Postsecondary Education Data System, this variable was gathered by using Admission and test scores, Admission and test scores, SAT and ACT Test Scores, and SAT Critical Reading 25^{th} percentile score, SAT Critical Reading 75^{th} percentile score, SAT Math 25^{th} percentile score, SAT Math 75 percentile score, ACT Composite 25^{th} percentile score, ACT Composite 75^{th} percentile score, Percent of first-time degree/certificate seeking students submitting ACT scores, and Percent of first-time degree/certificate seeking students submitting SAT scores. Data was gathered for all institutions in the sample. This was determined by combining the 25^{th} and 75^{th} related scores for SAT reading, SAT math, and ACT composite for a five-year period. Each

school's data is five-year aggregate which averages the annual percentages of undergraduates according to race from 2010-2011 to 2014-2015. A concordance table was used to unify the data under ACT/SAT score (College Board, 2009).

Outcome variable. Academic Progress Rate Penalties is a dichotomous variable which has been dummy coded. Data was gathered using the National Collegiate Athletic Association (NCAA) Academic Progress Rate Database this variable was gathered by using search filters for conference, school, year, and penalty. Data was collected for each institution in the sample for all sports between 2010-2011 and 2014-2015. If an institution's respective team earned a penalty during the selected years, it was dummy coded in the affirmative. The coding for this variable is as follows: 1 - Yes, 0 – No.

Methods

In order to determine the nature of the relationship between the outcome variable and the predictive variables, I utilized a regression analysis. As the outcome variable of APR penalty is a dichotomous variable and the predictor variables are either continuous or dichotomous, the best method of analyzing the data for this study was through a binary logistic regression. APR penalty was used as the outcome variable. The predictive variables: HBCU (institution type), expenditures per student-athlete, first generation students, Pell Grant recipients, acceptance percentage, enrollment yield, and adjusted ACT/SAT score were entered in the logistic regression. By determining the significant variables in the analysis, I am able to speak to the relationship of the APR program to the academic institutions at greatest risk of penalties. It also shed light on why wealthier institutions do not face similar challenges than HBCUs and LRIs.

Limitations in Data

Missing data. As not all data was available for all institutions in all sample groups, I had to use a different means of collecting data for missing variables which closely resembled my data collection for the available data. In total, four of the schools in the sample had some form of missing data. Fortunately, the missing data was limited to only three of the variables in the study: undergraduate accept rate percentage, undergraduate admission yield percentage, and adjusted ACT/SAT score. These institutions are Idaho State University, Savannah State University, Tennessee State University, and Weber State University. All four institutions had missing data for the undergraduate accept rate percentage and undergraduate admission yield percentage, while only Tennessee State University and Savannah State University had missing data for adjusted ACT/SAT score. I employed the following methods to find the missing data for the three missing variables.

Undergraduate Acceptance Rate Percentage is a continuous variable. Data was collected using the Petersons.com website, each institutions' profile page was found. Under the Admissions heading, I searched for the Acceptance Rate variable. As Peterson's only allows for the current year to be collected, this data is only reflective of the data provided as of January 14, 2018.

Undergraduate Admission Yield Percentage is a continuous variable. Data was collected using the Integrated Postsecondary Education Data System. Data for this variable was gathered by using Fall Enrollment, Gender, Attendance Status, and Level of Student, First time and Grand Total were selected, and for the time frame Fall 2010 through Fall 2014. Data was gathered for all institutions in the sample. Next, Petersons.com was used to collect "Accepted" data. This was found by finding the profile page for the respective university, looking under the Admissions section, and finding the Accepted result. As Peterson's only allows for the current year to be

collected, this data is only reflective of the data provided as of January 14, 2018. I was able to gather a five-year aggregate for the enrollees as mentioned above. I then determined the yield by dividing the five-year aggregate annual total accepted applicants by the one-year total enrollees figure.

Adjusted ACT/SAT Score is a continuous variable. Data for this variable was obtained using the Petersons.com website. Once the profile page was found for the schools in question, under the Test Score Accepted section, the data for ACT 25^{th} percentile and 75^{th} percentile was gathered and averaged to arrive at the 50^{th} percentile ACT score. As Peterson's only allows for the current year to be collected, this data is only reflective of the data provided as of January 14, 2018.

The nature of finding alternative data to mirror the desired data which I collected for this study signifies a limitation in this study. This is just one of several limitations which is a challenge within this study.

Collinearity in data. The major challenge to this study overall and in running this regression is the observation of several multicollinearity issues as a result of several variables having strong correlations with one another. The presence of multicollinearity between several variables is concerning, because it ultimately means that a complete model with all predictive variables included will be inconclusive when it comes to interpreting what percentage of the outcome variable is explained by each predictive variable. Table 9 shows the Pearson Correlation interactions between all variables in the model using the ≤ $40,000 data, which is the data set where the comparison group most closely resembled the treatment group spending patterns. As a result, I used this data to determine where multicollinearity was present.

According to Leech, Barrett, and Morgan (2015) multicollinearity can lead to "misleading and/or inaccurate results" where there are "high intercorrelations among some set of the predictor variables" (p. 110). Leech et al. (2015) use the figure of data correlated at .5 or .6 for the presence of collinearity, or multicollinearity. For the sake of this study, I will use .6 as my cutoff to identify the presence of collinearity issues.

Table 9

Correlation Matrix of variables in ≤$40,000 model

Variable	HBCU	First Gen	Pell	Accept	Yield	Adj. ACT/SAT	Exp. per SA
HBCU	-	.046	.903*	-.580	-.221	-.841*	.061
First Gen	.046	-	.321	-.016	.239	-.232	.022
Pell	.903*	.321	-	-.495	-.204	-.807*	-.020
Accept	-.580	-.016	-.495	-	.178	.470	.073
Yield	-.221	.239	-.204	.178	-	.378	-.179
Adj. ACT/SAT	-.841*	-.232	-.870*	.470	.378	-	-.093
Exp. per SA	.061	.022	-.020	.073	-.179	-.093	-

Notes. * = collinearity likely present, the relationships between the variables "HBCU", "Pell" and "Adjusted ACT/SAT" show a strong likelihood of multicollinearity when included together in any model.
According to Leech at el. (2015), a Pearson's Correlation of .6 or greater signifies the likelihood that collinearity is present.

The most highly correlated variables in the analysis is between the institution type variable of HBCU and Pell, which registers as having a Pearson Correlation of .903. This relationship is not surprising, especially because HBCUs are known for their mission to provide access to students poorer and disadvantaged economic backgrounds. It does mean that when the variables are run together in the regression that both outcomes will be skewed greatly in both their Sig. and Exp(B) statistics, which are indicators for whether or not the variable is significant

in the model along with its odds ratio, accordingly. The same issue of collinearity is apparent another two times with the variables included in the model. The second highest Pearson Correlation is between Pell percentage and Adjusted ACT/SAT Score of -.870. This very well could be plausible once again because the HBCU was created as a mean of access to higher education for blacks in the United States when many Predominantly White Institutions would not accept them. Though many HBCUs are very selective as they admit a lower percentage of students, it may make sense that as Pell percentage is increased at an institution, that the SAT score would have a downward trend. HBCUs do accept many students with lower test scores. It is evident that the poorest residents in the United States often have access to k-12 education which are far inferior to residents that are wealthier. According to Boschma and Brownstein (2016), in the majority of all major American cities, most African Americans attended public schools where the majority of their classmates are low-income. Reardon, Robinson, and Weathers (2016) identified that this disparity is the single greatest contributor of racial gaps in educational achievement. This last collinearity issue is between the HBCU variable and ACT/SAT score where there is a Pearson Correlation of -.841. This could potentially be explained by the idea that to provide access for poorer and disadvantaged populations, many HBCUs have lower ACT/SAT standards for admission.

Table 10 serves as a secondary means for identifying multicollinearity within the sample. The low tolerance levels related to HBCU (.082), Pell (.082), and Adjusted ACT/SAT (.176), signify that multicollinearity is very likely according to the metrics identified by Leech, Barrett, and Morgan (2015). These metrics identify that if there is a low tolerance score, that it is very likely that multicollinearity is present.

Table 10

Collinearity Statistics of variables in ≤$40,000 model

Model	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
HBCU	.082*	12.162
First Gen	.438	2.282
Pell	.082*	12.253
Accept	.627	1.596
Yield	.620	1.614
Adjusted ACT/SAT	.176*	5.683
Expenditures per SA	.838	1.193

Note. Collinearity likely present = *

According to Leech, Barrett, and Morgan (2015), "If the tolerance level is low (<1-R^2), then there is probably a problem with multicollinearity" (p. 115).
Seeing that HBCU, Pell, and Adjusted ACT/SAT show very low tolerance levels, it is a strong likelihood that there is multicollinearity present between these three variables

It is mainly these three variables that will make a full model extremely difficult to interpret due to the evidence of multicollinearity issues. This being said, I will use as many predictive variables as possible where mulitcollinearity is not present. This unfortunately means not including Pell percentage and adjusted ACT/SAT scores in this model as they would ultimately present challenges as they are highly correlated with my variable of interest of school type (HBCU).

Chapter 4: Results

Analysis Overview

The objective of this study is to understand the relationship between NCAA APR penalties with HBCUs and similarly-resourced peer institutions. These colleges and universities have been identified as having the greatest risk of being penalized for academic sanctions. This is

largely due to having limited resources in comparison to many wealthier peers in the FCS and Division I as a whole (Harrison, 2012; Paskus, 2012). Specifically, characteristics of mission, resources, academic profiles, and support services, were salient in identifying characteristics of institutions which are at greater risk of being penalized. In chapter three, I identified how I used these characteristics to identify colleges and universities in Division-I FCS classification for this study, as well as determining a treatment of HBCU institutions and three comparison groups of non-HBCU institutions.

Through descriptive analysis, I was able to determine that of the three comparison groups, institutions that spent an average of ≤$35,000, ≤$40,000, and ≤$45,000 per student-athlete during the 2010-2011 to 2014-2015 academic years, the comparison group of ≤$40,000 mirrored the spending patterns of HBCUs the closest. Because of this, I identified that it would be the best of the three comparison groups to use in running my analysis for this study. Though the ≤$40,000 does mirror the spending patterns of the HBCU group the closest, I also utilized the other comparison groups to better understand if results are sensitive to different definitions of "similarly resourced" institutions.

One challenge emerged as I began to evaluate my data to prepare for analysis. I noticed that issues related to multicollinearity emerged within three of my variables. The variables HBCU (institution type), Pell percentage, and adjusted ACT/SAT scores are highly correlated with one another. Due to the interplay between these three variables which skewed the regression results, it meant that I was unable to objectively interpret models that include all three variables entered simultaneously. In my preferred model, I used institution type as the variable of interest as it informed my research question most directly. I also showed what the model produced when the variables school type, Pell percentage, and adjusted ACT/SAT are run simultaneously,

though I noted that due to the presence of multicollinearity, that I could use this analysis to make any definitive conclusions.

Regression Analysis

The analysis I chose to address my research question "*Are HBCUs disproportionately affected by APR penalties/sanctions relative to other NCAA Division I colleges with similar resources?"* is a logistic regression. As I dummy coded my outcome variable of APR penalty to be dichotomous, with the other variables either continuous or dichotomous, a logistic regression allowed me to identify how the variables that I chose explained the outcome variable. I will show how these variables do so individually and collectively.

In reviewing the descriptive data of the variables in Chapter 3, I decided to separate my analysis into three tiers. The first tier is my primary analysis, and includes the comparison group which best reflects the spending patterns of the HBCUs in the sample (≤$40,000). It also includes my desired variable of interest, school type. My second tier is the secondary analysis. The secondary analysis includes my variable of interest (institution type), but focuses on the other two comparison groups (≤$35,000 and ≤$45,000) to better understand how spending patterns influence the outcome variable. Lastly, in the third tier, or the tertiary analysis, I kept the desired comparison group (≤$40,000), but I changed the variable of interest to Pell and Adjusted ACT/SAT in two separate analyses. I have chosen to do so to gain an understanding of how these variables interact with the other variables in the study which will provide me with a greater depth of understanding of how the NCAA APR metric impacts Division I HBCUs and similarly resourced peer institutions.

Primary Analysis - $40,000 Model (School Type as Variable of Interest)

As this model is the desired method for addressing my research question, I needed to have a complete picture of how the variables interacted to build the most complete model without introducing collinearity issues. Without this understanding there was a strong likelihood that a model with all variables run simultaneously would skew the data and my analysis of the outcomes. As noted in the collinearity analysis in Chapter 3 in Tables 9 and 10, there is a strong presence of multicollinearity in the ≤$40,000 model based on a collinearity matrix that I ran with all the desired variables for the model, along with a tolerance and VIF analysis. As a result, I chose to only include the variable of interest in my formal analysis, which is HBCU (institution type). To better understand the relationships between the independent variables and the outcome variable, I ran a preliminary logistic regression with all variables for the sole purpose of understanding which variables would be significant.

Removing the Influence of Multicollinearity

When running a logistic regression, part of the output in SPSS is a "variables not in the model" analysis. In its essence, this table shows if variables are significant for the dependent variable when entered into the model separately or individually. This provides an understanding of whether the correlation between the independent and dependent variables is significant.

Table 11

Variables not in equation in ≤$40,000 model

Variable	Significance
HBCU	**
First Gen	-
Pell	**
Accept	**

Yield	-
Adjusted ACT/SAT	*
Expenditures per SA	-

Notes. Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05

Table 11 shows that when entered into the model separately, that multiple variables end up being significant. As I cannot have a true understanding of how these variables will truly explain the outcome when run in a model together, this analysis shows that multiple variables are significant in explaining a relationship with the outcome variable (APR penalty). Specifically, HBCU (institution type), Pell, Accept, and Adjusted ACT/SAT are significant for the outcome variable. As I cannot run HBCU, Pell, and Adjusted SAT/ACT together, it indicates that there is value in running additional models with Pell and Adjusted SAT/ACT being the variables of interest.

Model Outcomes

For the primary analysis, I ran three separate analyses to understand the relationship of the variables entered on both the significance of the model, in addition to how these groupings of variables explain the outcome. The desired model, which is the most complete without introducing multicollinearity, is listed as "Step 2", shown in Table 12.

Table 12

Model Outcomes for ≤$40,000 data

Model	Variables	Cox & Snell R Square	Nagelkerke R Square	Sig.
Step 1	HBCU	.183	.244	**
Step 2	HBCU, First Gen, Accept, Yield, Expenditure per SA	.360	.482	***

Step 3	HBCU, First Gen, Pell, Accept, Yield, Adjusted ACT/SAT, Expenditures per SA	.365	.488	**†

Notes. Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05, † = multicollinearity present

Though I already have an understanding of the significance of the HBCU variable when run alone as a result of the analysis in Table 11, I do not know how much this variable explains of the outcome variable. The Cox & Snell R Square and Nagelkerke R Square statistics tell me that when run alone, that HBCU (institution type) explains between 18.3% and 24.4% of APR penalty. The Pearson r value between these two variables is .903. This is substantial for a single variable.

When first gen, accept, yield, and expenditure per student-athlete are added into the model in "Step 2", it paints a much more complete picture of the relationship between these variables collectively and APR penalty. Together, this model explains between 36% and 48.2% of the outcome variable, and is significant at the p<.001 level, which indicates a very strong and significant relationship. Essentially, there is an extremely low percentage chance that this relationship happens by chance. Though "Step 3" does not add helpful understanding to the model, as it is latent with multicollinearity, it does show that by adding Pell and Adjusted ACT/SAT back into the model, that it roughly explains the outcome variable at the same rate as the second model. Without these two variables entered, there is not much lost regarding the explanation of the outcome variable.

Odds Ratio Outcome

The odds ratio tells me more about the nature of the relationship of each variable to the outcome variable. Specifically, it tells me the increased or decreased odds likelihood of an APR penalty relative to each significant finding.

Table 13

Variables in the equation for ≤$40,000 model

Variable	Exp(B)	S.E.	Sig.
HBCU	6.882	.913	*
First Gen	1.023	.055	-
Accept	.949	.028	-
Yield	1.092	.039	*
Expenditures per SA	1.000	.000	-

Notes. Significance Codes – '***' = p<.001, '**' = p<.05, '*' = p<.01

Table 13 shows the outcomes of the odds ratio for the preferred model in this study. The odds ratio in this model informs my research question, as the variable of interest, school type, shows a very high coefficient outcome. Specifically, the HBCU variable indicates that schools that are categorized as HBCU are 5.8 times more likely to accrue an APR penalty than those which are not HBCUs. This finding is substantial, and indicates that HBCUs appear to be impacted disproportionately when it comes to receiving APR Penalties compared to their similarly resourced non-HBCU peers. Another finding which is significant in the model is related to yield. In this case, institutions which have a higher yield are 9% more likely to accrue a penalty. This is an interesting finding. This could shed light on strategies related to recruitment. When I say this is an interesting finding, it is because this variable really has nothing to do with selectivity but rather how effective institutions in the sample are at getting students to attend

their institution once admitted. These findings substantiate the claims that many have made which claimed that the APR metric indeed does have a disparate impact on the HBCU.

Secondary Analysis - $35,000 and $45,000 Models (Institution Type as Variable of Interest)

As I mentioned earlier in the chapter, this secondary analysis is used to provide further depth to understanding if the outcomes in the ≤$35,000 and ≤$45,000 models are consistent with the findings of the ≤$40,000 data set. As indicated in Chapter 3, the second most similar group as it relates to spending is the ≤$45,000 model, followed by the ≤$35,000 model. This makes the ≤$45,000 model second in preference when it comes to analysis.

Collinearity Analysis

Table 14

Correlation Matrix of variables in ≤$35,000 model

Variable	HBCU	First Gen	Pell	Accept	Yield	Adj. ACT/SAT	Exp. per SA
HBCU	-	.025	.915*	-.569	-.376	-.924*	.247
First Gen	.025	-	.256	.001	.230	-.219	.025
Pell	.915*	.256	-	-.476	-.372	-.942*	.114
Accept	-.569	.001	-.476	-	.224	.534	-.017
Yield	-.376	.230	-.372	.224	-	.444	-.134
Adj. ACT/SAT	-.924*	-.219	-.942*	.534	.444	-	-.182
Exp. per SA	.247	.025	.114	-.017	-.134	-.182	-

Notes. * = collinearity likely present, the relationships between the variables "HBCU", "Pell" and "Adjusted ACT/SAT" show a strong likelihood of multicollinearity when included together in any model.
According to Leech, Barrett, and Morgan (2015), a Pearson's Correlation of .6 or greater signifies the likelihood that collinearity is present.

Table 14 shows the correlation matrix for the institutions included in the ≤$35,000 In this model, similar, yet stronger, multicollinearity issues appear. In this instance, the three variables which showed multicollinearity in the previous model, all show similar relationships. The only difference here is school type, Pell, and adjusted ACT/SAT all now have Pearson Correlations over .9. This could be due to more non-HBCUs being removed from the sample than non-HBCUs. In this outcome, it is evident that it is not possible to run all three variables in a model due to the very apparent nature of multicollinearity.

Table 15

Collinearity Statistics of variables in ≤$35,000 model

Model	**Collinearity Statistics**	
Variable	**Tolerance**	**VIF**
HBCU	.057*	17.463
First Gen	.439	2.276
Pell	.068*	14.621
Accept	.612	1.633
Yield	.584	1.713
Adjusted ACT/SAT	.068*	14.631
Expenditures per SA	.740	1.351

Notes. Collinearity likely present = *
According to Leech, Barrett, and Morgan (2015), "If the tolerance level is low then there is probably a problem with multicollinearity" (p. 115).
Seeing that HBCU, Pell, and Adjusted ACT/SAT show very low tolerance levels, it is a strong likelihood that there is multicollinearity present between these three variables

Table 15 substantiates the multicollinearity presence between the three variables, as all three tolerance levels are below .1. Additionally the VIF for all three variables is well above 10, which was not the case in the ≤$40,000. This unfortunately tells me that though the trends are the similar to the other models, that this model is much more volatile and due to the smaller sample

size, not a preferred for my analysis. Of the 12 institutions that appear in the ≤$40,000 but not in the ≤$35,000 model, all 12 are non-HBCU institutions. In the context of this analysis, this means that the ≤$35,000 group is a much more concentrated grouping of HBCUs.

The ≤$45,000 grouping is consistent with the ≤$35,000 and ≤$40,000 data, so far as HBCU, Pell, and adjusted ACT/SAT all show high correlations once again. The ≤$45,000 group dilutes the concentration of HBCUs compared to the ≤$35,000 and ≤$40,000 groups, as it includes nine additional non-HBCU schools in the sample (compared to the ≤$40,000 group).

Table 16

Correlation Matrix of variables in ≤$45,000 model

Variable	HBCU	First Gen	Pell	Accept	Yield	Adj. ACT/SAT	Exp. per SA
HBCU	-	.174	.883*	-.509	-.196	-.768*	-.084
First Gen	.174	-	.493	.081	.170	-.493	-.218
Pell	.883*	.493	-	-.339	-.141	-.865*	-.204
Accept	-.509	.081	-.339	-	.204	.203	.112
Yield	-.196	.170	-.141	.204	-	.213	-.151
Adj. ACT/SAT	-.768*	-.498	-.865*	.203	.213	-	.175
Exp. per SA	-.084	-.218	-.240	.112	-.151	.175	-

Notes. * = collinearity likely present, the relationships between the variables "HBCU", "Pell" and "adjusted ACT/SAT" show a strong likelihood of multicollinearity when included together in any model.
According to Leech, Barrett, and Morgan (2015), a Pearson's Correlation of .6 or greater signifies the likelihood that collinearity is present.

As expected, Tables 16 and 17 confirm the multicollinearity among the three variables in question, though Adjusted ACT/SAT does drop considerably. Though its tolerance statistic is on

the fringe of qualifying as collinearity, it is still strong enough that all three variables cannot be included in the same model, nor could two of the three.

Table 17

Collinearity Statistics of variables in ≤$45,000 model

Model	**Collinearity Statistics**	
Variable	**Tolerance**	**VIF**
HBCU	.097*	10.270
First Gen	.385	2.600
Pell	.085*	11.818
Accept	.600	1.666
Yield	.785	1.274
Adjusted ACT/SAT	.205*	4.885
Expenditures per SA	.852	1.174

Notes. Collinearity likely present = *
According to Leech, Barrett, and Morgan (2015), "If the tolerance level is low then there is probably a problem with multicollinearity" (p. 115).
Seeing that HBCU, Pell, and Adjusted ACT/SAT show very low tolerance levels, it is a strong likelihood that there is multicollinearity present between these three variables

As I did with the ≤$40,000 group, I ran a regression to see how the variables would interact with the outcome if entered individually for the outcome variable. Table 18 reports the same variables being significant as in the ≤$40,000. This indicates largely, that even with removing 12 non-HBCUs, that the variables are showing similar relationships to the outcome variable as seen in the ≤$40,000 analysis.

Variables Not in Equation

Table 18

Variables not in equation in ≤$35,000 model

Variable	Significance

HBCU	*
First Gen	-
Pell	*
Accept	**
Yield	-
Adjusted ACT/SAT	*
Expenditures per SA	-

Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05

When this same analysis is run for the ≤$45,000 model, a new variable becomes significant for the first time. First gen shows significance at the p<.05 level, which may largely be due to the impact of adding in nine non-HBCU schools into the sample (in reference to the ≤$40,000 group). This could trigger significance because the "wealthier" institutions in the model, by comparison, may not accept as many first generation college students as HBCUs do.

Table 19

Variables not in equation in ≤$45,000 model

Variable	Significance
HBCU	***
First Gen	*
Pell	**
Accept	**
Yield	-
Adjusted ACT/SAT	**
Expenditures per SA	-

Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05

The model outcomes with both samples, though are not the preferred group to inform the research question, do signify if the data is showing consistent patterns across all three groups. In both cases, I should expect to see the variables predict a similar percentage of the APR penalty variable.

Model Outcomes

As expected, the "step" analysis with three different models, shows similar trends that appeared in the ≤$40,000 data set. Though the statistics for the Cox & Snell and Nagelkerke are not as strongly correlated with the outcome, they are very similar in the significance levels and how much of the outcome variable can be predicted by the different models within the sample.

Table 20

Model Outcomes for ≤$35,000 data

Model	Variables	Cox & Snell R Square	Nagelkerke R Square	Sig.
Step 1	HBCU	.143	.192	*
Step 2	HBCU, First Gen, Accept, Yield, Expenditure per SA	.335	.448	**
Step 3	HBCU, First Gen, Accept, Yield, Expenditure per SA, Pell, Adjusted ACT/SAT	.339	.453	*†

Notes. Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05, † = Multicollinearity present

As I expected to find based on the analysis of the data from the ≤$35,000 and the ≤$40,000 data, Table 20 shows that the data remains consistent. The only difference here is the strength of the significance, now at the p<.001 level for both "Step 1" and "Step 2". The Cox & Snell and Nagelkerke statistics show that the data reflects a very similar finding as in the ≤$45,000 data, and explains slightly less of the outcome variable. The strength significance reflects that this relationship is less likely to occur by chance. The strength significance may also reflect the power of the HBCU variable, as it does have the strongest Cox & Snell and Nagelkerke of the three models.

Table 21

Model Outcomes for ≤$45,000 data

Model	Variables	Cox & Snell R Square	Nagelkerke R Square	Sig.
Step 1	HBCU	.199	.269	***
Step 2	HBCU, First Gen, Accept, Yield, Expenditures per SA	.326	.440	***
Step 3	HBCU, First Gen, Accept, Yield, Expenditures per SA, Pell, Adjusted ACT/SAT	.337	.456	**†

Notes. Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05, † = Multicollinearity present

As the relationships of the data has been fairly consistent between the three modules, I expect to see similar outcomes with the odds ratios. I am most interested in the odds ratios for my variable of interest, school type, which will provide greater context as to whether or not the relationship with APR penalty reflects a disparate outcome across all three groups.

Odds Ratio Outcome

The odds ratios for the ≤$35,000 show similar trends, although the HBCU only proves significant at the p<.1 level. This could be due to the idea which I presented earlier, that there is a greater concentration of HBCUs in this category. Yield does come across as significant, once again, which is consistent with the previous analysis. This highlights institutions with higher yields predict penalties 8% more than institutions with lower yields. This was not an expected finding, though it does provide interesting insight into institutions which are able to attract a greater number of students who were admitted to actually enroll. A possible explanation of this could be tied to the fact that these institutions are admitting students who have fewer options for college selection. This finding could be explained by the more minimally resourced institutions in the sample, as this finding was consistent with the ≤$40,000 module. This may be a good takeaway for admissions and recruitment teams at institutions with lesser finances. In institutions with higher yields, enrollment management teams should take a look at why this is so. Perhaps students who are attending are doing so because they are applying to fewer schools. If this is the case, there could be an established relationship in lesser resourced institutions with retention of these students, as that is part of what the APR reflects.

Table 22

Variables in the equation for ≤$35,000 model

Variable	Exp(B)	S.E.	Sig.
HBCU	7.009	1.076	.
First Gen	1.020	.061	-
Accept	.948	.030	.
Yield	1.085	.041	*
Expenditures per SA	1.000	.000	-

Notes. Significance Codes – '***' = p<.001, '**' = p<.05, '*' = p<.01, '.' = p<.1

Table 22 and 23 show the outcomes of the odds ratios for the ≤35,000 and ≤45,000 models. The ≤$45,000 shows one major difference compared to the ≤$35,000 sample. In this case, HBCU is significant, though yield is not. This shows two things. The more relevant of the two (as it pertains to my research question) is that the odds ratio reflects that HBCUs are 6.5 times more likely to receive a penalty than non-HBCUs. The ≤$45,000 output further substantiates the notion that HBCUs are disproportionately impacted by the APR program than non-HBCUs. The second item is that it appears as though yield does not show a significant finding. In this case, the additional schools in the sample may have high yields, but do not receive an increase in APR penalties. These overall findings are consistent with the literature and signifies an important finding that resources are not at the crux of predicting penalties, rather, it appears that mission is the difference in penalty allocation.

Table 23

Variables in the equation for ≤$45,000 model

Variable	Exp(B)	S.E.	Sig.
HBCU	7.514	.825	*
First Gen	1.064	.047	-
Accept	.969	.023	-
Yield	1.058	.032	-
Expenditures per SA	1.000	.000	-

Notes. Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05

Tertiary Analysis - $40,000 Model (Pell/Adjusted ACT/SAT Substitutions as Variables of Interest)

The tertiary analysis is intended to gain a more peripheral understanding of the impact of the Pell and adjusted ACT/SAT variables play in explaining the outcome variable. As these do not include the main variable of interest, institution type, these models complement the outcomes in the primary and secondary analyses, and provide greater depth with the introduction of two new variables. As the collinearity matrix is the same as that in the ≤$40,000 analysis (Tables 11 and 12) as is the variables not in the equation (Table 13), I jump right in to looking at how each variable explains the APR penalty variable.

Model Outcomes

When substituting Pell as the variable of interest for HBCU, the results seem to be very similar, though the Pell variable does not explain as much of the outcome as HBCU does. As many students at HBCUs are coming from lower socioeconomic backgrounds, it makes sense that there would be a very high percentage of Pell recipients. As this is likely the case, it would follow that by substituting Pell for HBCU would yield similar results. This is not to say that non-HBCUs do not admit students coming from disadvantaged backgrounds, it just means that Pell is a more salient characteristic to the HBCU than non-HBCU in describing its student population. For schools in the ≤$40,000 population, HBCUs average just shy of 69% of students who are Pell recipients, while non-HBCUs average about 37% percent of enrollees who are Pell recipients. The findings in Table 24 almost mirror those in Table 13.

Table 24

Model Outcomes for ≤$40,000 data with Pell as variable of interest

Model	Variables	Cox & Snell R Square	Nagelkerke R Square	Sig.
Step 1	Pell	.142	.189	**

Step 2	Pell, First Gen, Accept, Yield, Expenditure per SA	.341	.456	**
Step 3	HBCU, First Gen, Pell, Accept, Yield, Adjusted ACT/SAT, Expenditures per SA	.365	.488	**†

Notes. Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05, † = Multicollinearity present

The findings in Table 25 when substituting adjusted ACT/SAT in for HBCU, are not surprising as well, considering the results reported thus far in this chapter. As adjusted ACT/SAT is not as closely related to HBCU as Pell, it follows that Adjusted ACT/SAT may not predict penalty as strongly as HBCU and Pell predict penalty. This could be due to the fact that HBCU and non-HBCUs attract students of similar academic profiles. The average adjusted ACT score for HBCUs in the ≤$40,000 is 17.8% while non-HBCUs average 21.87%. Though there is a sizeable gap in the difference between the adjusted ACT averages, Pell appears to be more salient of a characteristic for HBCUs given the greater disparity in comparisons. In the context of the APR metric, it does follow that students with weaker academic profiles coming out of high school may struggle to stay in college or meet the eligibility markers set forth by the NCAA. If this is the case, then schools who have more of these students are likely to be sanctioned at a greater rate than schools who attract students with stronger academic profiles. The odds ratios for the new variables of interest, Pell and adjusted ACT/SAT, will provide a greater understanding of how the college preparedness and socioeconomic status uniquely relate to APR sanctions among schools in the ≤$40,000 sample.

Table 25

Model Outcomes for ≤$40,000 data with Adjusted ACT/SAT as variable of interest

Model	Variables	Cox & Snell R Square	Nagelkerke R Square	Sig.
Step 1	Adjusted ACT/SAT	.087	.117	*
Step 2	Adjusted ACT/SAT, First Gen, Accept, Yield, Expenditure per SA	.337	.451	**
Step 3	HBCU, First Gen, Pell, Accept, Yield, Adjusted ACT/SAT, Expenditures per SA	.365	.488	**†

Notes. Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05, † = Multicollinearity present

Odds Ratio Outcomes

Surprisingly, Table 26 does not show Pell as being a significant variable. Considering the results of the models thus far, I expected to see this variable as significant. This mainly speaks to the idea that HBCU is not solely explained by Pell, and there are different characteristics which may be influencing penalties.

Table 26

Variables in the equation for ≤$40,000 model with Pell as variable of interest

Variable	Exp(B)	S.E.	Sig.
Pell	1.048	.026	.
First Gen	.988	.059	-
Accept	.940	.027	*
Yield	1.095	.039	*
Expenditure per SA	1.000	.000	-

Notes. Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05, '.' = p<.1

Table 27, which shows the odds ration when adjusted ACT/SAT is substituted as the variable of interest for HBCU, also does not prove significant. Consistent with the findings in Table 26, accept and yield proved significant. Addressing yield, it appears evident, once again, that institutions that are able to generate a high yield of enrollees, are about a 9% to 10% greater risk for a penalty. This may be explained by enrollees having limited choices in college selection. In regards to accept percentage, it appears that the institutions which are more selective are 6% to 7% percent less likely to receive a penalty, which means they likely admit students with stronger academic profiles. If schools are less selective, they are more likely admitting students with lower academic profiles. When this is the case, student-athletes stand a greater chance of struggling and are at greater risk of not being eligible and retained.

Table 27

Variables in the equation for ≤$40,000 model with Adjusted ACT/SAT as variable of interest

Variable	S.E.	Exp(B)	Sig.
Adjusted ACT/SAT	.199	.712	.
First Gen	.057	.998	-
Accept	.027	.938	*
Yield	.041	1.105	*
Expenditure per SA	.000	1.000	-

Notes. Significance Codes – '***' = p<.001, '**' = p<.01, '*' = p<.05, "." = p<.1

Summary

The findings in this chapter are very alarming. In both the ≤$40,000 and ≤$45,000 models, the outcomes of the logistic regression showed that the odds of HBCU institutions

receiving an APR penalty are six to eight times more likely than their non-HBCU peers. This substantiates claims that the APR does, in fact, have a disparate impact on HBCUs. Though it is clear that institutions that are penalized do mostly fall into a LRI category for the most part, the HBCU mission is a much stronger predictor of penalty than resources alone. As these models predict between 30% and 50% of APR penalties, it is likely that there is much more to the picture than is being captured in this study.

Secondary findings indicated that yield was a smaller, yet significant, issue for schools in the sample. Institutions that were able to secure a greater yield of attendees were at a 6% to 7% higher risk of penalty than those with a lower yield. The data also supported that more selective institutions (according to acceptance rates) were 9% to 10% percent less likely to be penalized than schools that were not as selective.

These findings are further synthesized in Chapter 5. Chapter 5 will go into greater depth on interpreting these results in context and provide discussion and recommendations on future study and policy implications for the APR metric. It will also make sense of the outcomes through the theoretical model.

Chapter 5 – Conclusion and Recommendations

Purpose

The purpose of this study was to evaluate the nature of the relationship of the NCAA Academic Performance Rate metric with Division I Historically Black Colleges and Universities, and similarly resourced non-HBCU peers. This study drew inspiration from two areas. The first area, previous research, focuses on two empirical studies developed to analyze perceptions of the APR's impact on Division I membership schools, conducted by Christy et al. (2008), Johnson et al. (2012), and Kirkpatrick (2012). The second area of inspiration comes from two articles in the

Journal of Intercollegiate Sport in 2012, which specifically outline the history of the APR (Harrison, 2012) and the implications for HBCUs and LRIs in navigating the program, specifically as it relates to identifying characteristics of schools which are the greatest predictors of APR penalties (Paskus, 2012). Interwoven, these areas of inspiration helped me to develop my research question for the study: *Are HBCUs disproportionately affected by APR penalties/sanctions relative to other NCAA Division I colleges with similar resources?*

This study differs from the studies conducted previously on this topic in several ways and as a result it will help to inform policy recommendations to the NCAA as well as membership schools. First, and most importantly, it evaluates the APR impact at the institution level, and focuses on a broad representation of membership. This was the main divergence from Johnson, at al.'s (2012) study, which looked primarily at students at a single institution at the student level. Second, this study differs from previous studies is that it does not focus on perception, but takes aim at understanding the variables which best explain academic penalties, which differs from Christie, Seifried, and Pastore's (2008) and Kirkpatrick's (2012) studies. The third way this study differs is that it identifies the populations which are impacted most negatively by the APR program rather than focusing on all membership schools. Lastly, the study is current, and the results are reflective of trends that are happening in the most recent years of the program. These three differences will speak to the current state of the APR program and whether or not it is having a disparate impact on membership subgroups according to mission and resources.

Summary of Results

This study analyzed the impact of APR penalty on 60 public colleges and universities belonging to NCAA Division I FCS classification. Rather than conducting this study on the impact of Division I membership as a whole, I focused on the lowest resourced institutions

which are theoretically and historically impacted most adversely by the APR (Harrison, 2012; Paskus, 2012). The negative impact of the APR comes most directly in the form of NCAA sanctions which range from loss of practice time, to scholarship reduction, and also secondarily through a public reprimand by the NCAA in their annual APR summary press release.

Specifically, this study focused on the current impact of the metric during a five-year span (2010-2011 to 2014-2015). The study divides the 60 institutions into four groups: HBCU, and non-HBCU colleges and universities spending ≤$35,000, ≤$40,000, and ≤$45,000 annually per student-athlete. I used seven variables to explain the outcome variable of APR penalty in a binary logistic regression. These variables, HBCU, first generation student percentage, Pell percentage, accept percentage, yield percentage, adjusted ACT/SAT score, and expenditure per student-athlete.

Of these variables, the variable of greatest interest was HBCU (or institution type), as the goal of this study was to understand if there was a significant difference between HBCU and similarly resourced non-HBCU institutions with APR penalty. The key finding of this study identified that, depending on the comparison group, the odds of HBCU institutions being penalized are between six and eight times greater than similarly resourced non-HBCU institutions. This finding suggests that the APR program does have a disparate impact on HBCUs.

The other variables of interest, Pell percentage and adjusted ACT/SAT score, were found to also be significant predictors of APR academic sanction. These variables provide further depth to the understanding of the characteristics of schools which are at greatest risk for receiving penalties. In short, schools with greater percentages of students who were Pell eligible had greater odds of being penalized, as did schools who admitted students with lower ACT/SAT

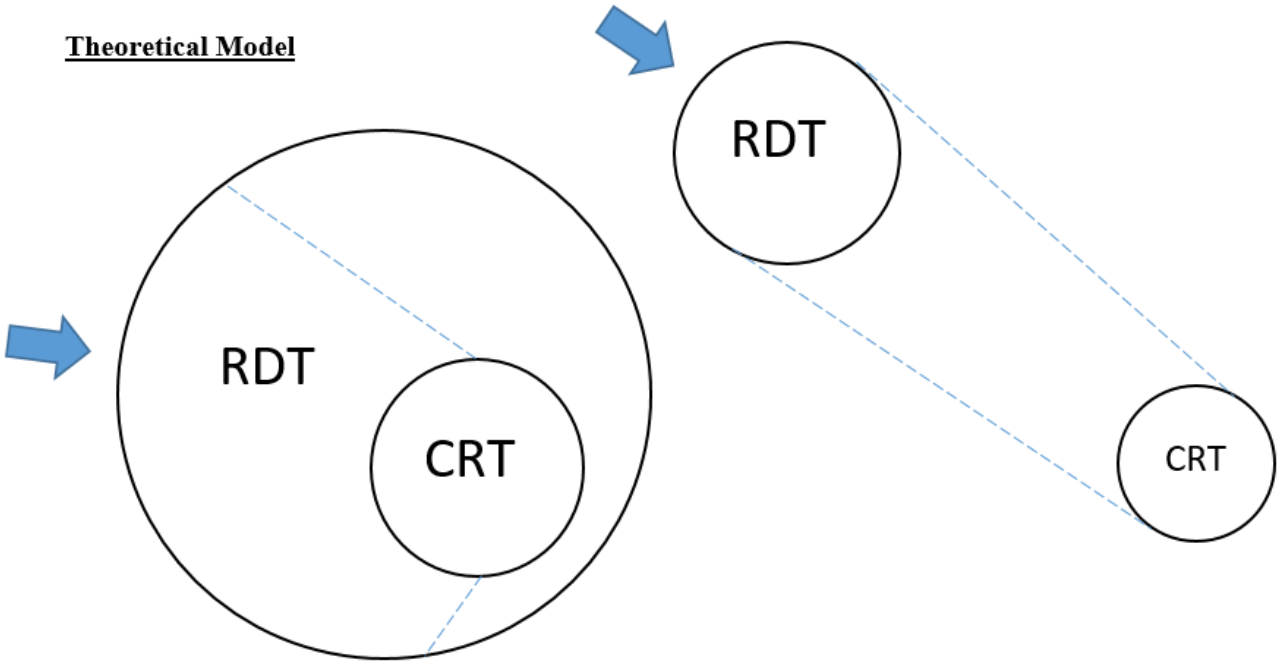
scores. Accept percentage was also found to be significant in two of the three models (≤$35,000 and ≤$40,000).

Two variables of interest that did not show great significance in the models were expenditure per student-athlete, which was not significant in any of the three models, and first gen, which only proved significant in the ≤$45,000 model. These results show that mission as it pertains to the HBCU is multifaceted (not just serving first-generation students). Also, institutions with greater percentages of first generation college students were just as likely to be penalized as those with lower percentages of first generation college students.

Theoretical Analysis

Two of the guiding theories which provided the foundational structure for this study were Critical Race Theory and Resource Dependence Theory. As this study sought to understand whether resource, race, or a combination of both were the crux of the problem. As college athletics, especially college football and college basketball, have been referred to as the front porch of the university, setbacks and failure become intimately intertwined with the perceived and direct culture of said university (Bass, Schaeperkoetter, & Bunds, 2015). A deficient athletics program *could* pose troublesome for the health of the university as a whole.

Figure 2 (from Chapter 1)
Theoretical Model: Adapted from Harris' Critical Race Theory (2012) and Pfeffer and Salancik's Resource Dependence Theory (1978)



It is the intersection of these two theories, or the layering of CTR beneath RDT which provides the lens by which these findings are interpreted. As one looks through the lens of RDT, it is evident that the true nature of the issue of sanction is rooted in race. Low resource levels plague institutions that accrue sanctions. Within that subset of institution, the additional layering of race proves to be the conditions where greatest negative impact is felt under APR.

RDT explains how institutions can reduce their dependence on the environment, or external supports, and uncertainty. According to Pfeffer and Salancik (1978), managers who can effectively exert control over their resources have greater power in their organization and environment. Something that proved evident in the literature review was that amongst the pooper Division I institutions, the HBCU struggles most in this arena. The wealthiest institutions in Division I classification, the Power 5, did not register a single sanction in this study. This could

be attributed to systematic and longstanding inequity in funding at the state level compared to their similarly resourced PWI peers. RDT theory proposes a five-tiered approach to assisting organizations with minimizing the dependency on the environment. Of the five tiers, one option does not appear to be plausible for the HBCU to maintain its independence, which is merging or vertical integration. A merger would only make sense to pair with a flagship university within each state, but doing so would most likely remove the independence and autonomy of the HBCU as it currently exists. Several of the other options do provide reasonable options for the HBCU, including joint ventures or relationships with other colleges or universities. This would prevent a merger from taking place and allow for the HBCU to maintain independence and autonomy. Reshaping the board of directors/regents at HBCUs is another option posed by the model – as the change in decision making at these universities and colleges could prompt change in approach to seeking out new streams of revenue and spending on campus. Political action is the fourth tier and one that has been vetted by the HBCU through lawsuits at the state level over the course of many decades. The issue is the reneging of the payment to HBCUs as a result of these successful lawsuits. Should these lawsuits pay out in full, or political intervention yield a steadier stream of state funds to the HBCU, a great deal of uncertainty could be avoided on campus at the HBCU and a strengthening of the university would occur. As RDT does address the actions that could be taken at the institutional level, it is important to address the part of the issue that is beyond their collective control at the moment, and that is the policy decisions and programs devised by the NCAA. Specifically when it comes to the APR metric, there is a strong presence of inequity which is further addressed by CRT.

CRT, centered in Critical Theory, posits that the impact of a capitalistic society is an obstacle to human progress. In order to address the paradox that racism still exists in social

practices and institutions even though these practices are openly condemned, human struggle and social consciousness are necessities. The findings of the study suggest that the APR metric has roots in a disparate impact related to HBCUs. At the surface level, this points to the need for the overhaul of the APR metric as a means of evaluating the APP so that a disparate impact is not present. At a deeper level, this points to the inequities that HBCUs face in society today in relationship to institutions primarily serving White students.

This theoretical model underscores the necessity for the APR metric to be reevaluated and a necessary intervention both at the state level and the NCAA so HBCUs are afforded a more equitable means of being supported financially and evaluated for academic success outcomes.

Implications of Study

At the heart of the NCAA's core values are two salient ideas which exist to protect the student, and the values of individual institutions. The NCAA supports an inclusive culture which "fosters equitable participation for student-athletes" and respect for institutional autonomy and philosophical differences (NCAA, 2014f, para 6). The very findings of this dissertation challenge the notion that this program is grounded in the spirit of equity and respect for philosophical differences. As Blackman (2008) describes in "The NCAA's Academic Performance Program: Academic Reform or Academic Racism" the NCAA has the duty to correct the inequities of the program due to its principle of nondiscrimination outlined in the 16 Principles for Conduct of Intercollegiate Athletics (NCAA, 2016b).

The foundation of the HBCU is rooted in access and opportunity for Black Americans who have a longstanding history of marginalization in the United States. At the heart of equity, is the idea that every participant is given the necessary tools to be successful. These findings

support the claims made by many scholars that the APR metric does indeed have a discriminatory and disparate impact on HBCUs which undermines the very core values of the NCAA. (Blackman, 2008; Eitzen, 1987; Forde, 2006; Grasgreen, 2013; Jackson, 2016; Khurshudyan, 2015; Knight Commission, 1991; Knight Commission, 2001; Mondello & Abernethy, 2000; Oriard, 2012).

Walter Harrison, one of the main architects of the APR, identifies in a 2012 that the charge for the NCAA in creating the APR was to "create a system that will produce improved graduation performance, particularly in high profile sports, without having a disparate impact on minorities" (p. 66). In reflecting on the intention of the program, it appears as though only one of the three prongs of this charge has been successful. Yes, the overall graduation performance of the NCAA Division I membership schools has increased but the program *has* had a disparate impact on minorities, and done so especially in the high profile sports of football and basketball, which have amassed the lion's share of penalties during the history of the APR (Hosick, 2016c). The argument can be made that increasing high standards for student-athletes and membership institutions is a good thing, as I personally agree as an academic support administrator; however, this process is leaving many schools behind who need greater attention and support through this process.

Harrison (2012) does admit later in the same article that HBCUs and LRIs "would be more heavily impacted than would other institutions" (p. 71), which alluded to a trend which was already visibly present prior to his article. HBCUs were already proportionately yielding a substantial percentage of the overall penalties in the early years of the APR. In 2012, Paskus addressed this impact directly, stating that the NCAA has identified predictive measures which may contribute to APR concerns for HBCUs. This list includes but is not limited to mission,

resources, academic profiles, and support services. I contend that in this article, this statement undersold the impact of mission in relationship to resources.

Wealthier institutions have been able to safely navigate away from penalties since the inception of the program in 2004. Of the 156 APR penalties handed out to membership schools in men's sports between 2010-2011 and 2014-2015, zero went to any one of the 65 "Power 5" institutions. This is eye opening to say the least, and it does raise questions to equitable treatment according to resource level. However, of those 156 penalties, 102 were levied on HBCUs, a group that makes up only 6% of NCAA Division I membership and 19% of FCS membership supports the findings that HBCUs are five to six times more likely to be penalized compared to their similarly resourced peers, who according to this study are largely suspected of being comprised of LRIs. The impact of mission, when evaluating institutions of similar resource, has a much more profound impact on the chances of being sanctioned. This realization makes being an HBCU a huge disadvantage in Division I athletics.

Discussion

Blackman (2008) summed up this impact best in addressing former NCAA president Miles Brand's comments that the APR penalties are not an issue of race, but of financial resources. Blackman cited the challenge of retention for many Black Americans due to lower socioeconomic status, citing that in 2006 that roughly 25% of the nation's Black population lived under the poverty line:

> Therefore when Brand and the NCAA assert that the problem is about money, they are only telling part of the truth. The more difficult consideration is that a lack of financial resources is often a proxy for race in the context of higher education and college athletic.

> This lack of financial resources seems to have contributed to the discriminatory impact of the APP. (Blackman, 2008, p. 243)

This problem manifests itself most directly at the HBCU. So what is the answer for HBCUs? Do they try to change to fit the current landscape of the NCAA, or does the NCAA change to fit the unique needs of the HBCU? I argue that based on the core values of the NCAA to respect philosophical differences and support equity, that it is the duty of the NCAA to provide a more equitable playing field for these colleges and universities.

The NCAA, to its credit, has made efforts to support HBCUs and LRIs in two main ways. The first way was in the establishment of the Accelerating Academic Success Program (NCAA, 2015e), a program designed to provide professional development, and more importantly, NCAA grants to struggling LRI institutions (NCAA, 2018). Unfortunately, these grants are not given to all struggling institutions, and the maximum grant over three years is $900,000, which sounds like a lot, but often does provide the long-term funds for the substantial staffing needs that these institutions have. Factoring this money into the bottom line of a budget does provide relief of hardship temporarily, but considering that the additional spending of $500 to $1,000 per pupil annually for the three years is not a long term solution, nor a substantial change in spending, means that many HBCUs are right back where they started after the grants run out. According to Gerald Gurney, the former president of The Drake Group and a professor at the University of Oklahoma, the grant money is often “too little and too late”, especially when compared to the revenues that larger Power 5s are generating (Khurshudan, 2015). Gurney believes that the odds are stacked against smaller budgeted institutions in Division I due to the large amount of revenues that Power 5 colleges and universities generate. Ideally, for grants to be meaningful,

they need to be much more substantial and sponsor endowed positions, like additional administrative support staff, compliance officers, and student-development specialists.

The second means of supporting these institutions has been through the NCAA developed HBCU and LRI Academic Advisory Board, which brings together leadership representing a number of HBCUs and LRI to collectively interpret recommendations and policies made by the Committee on Academics, and also to provide guidance to institutions which qualify for the Acceleration Academic Success Program classification. It is hard to quantify the impact that this group has had on overall APR success, but institutions like Southern University have already started to improve upon some extremely challenging years of APR sanctions. In recent years, their APR scores have improved significantly. It is likely that they have benefitted from guidance provided by the Advisory Board.

The NCAA is underway in a new initiative called the Academic Based Revenue Distribution to award Division I highly academic performing institutions and conferences with additional money to support athletic departments (Hosick, 2016a; NCAA, 2017a). This program is open to all membership schools in Division I. Starting in the 2019-2020 will provide money to schools who are able to hit one of the three following markers: a single year overall all-sport APR score of 985 or greater, an overall all-sport GSR of 90% or higher, or a federal graduation rate which is at least 13 points higher than the Federal Graduation Rate of the general student body at that institution. In its earliest years, it is estimated that the annual payouts will be in the neighborhood of $50,000 per awarded institution (to be distributed by their respective conference), and based on NCAA projections, due to increased revenues from television contracts, this number will grow to more than a half-million dollars by 2032.

On a surface level, this program does not appear to help close the gap, or fairly support HBCUs since it is predicated partially on the APR and will most likely help colleges and universities that can afford to provide greater academic support to their student-athletes, an area that HBCUs are largely outmatched compared to their wealthier peers. Though this intention is novel by the NCAA, it could encourage colleges and universities to cut corners to get a piece of the pie. Specifically, institutions and students may turn a blind eye to integrity within the classroom, or act without the highest sense of integrity in pressuring faculty to support student-athletes in order to qualify for these funds. It also must be noted that the generated funds also do not need to go towards providing academic support to student-athletes. This seems to be counterintuitive to the program as a whole.

So where do HBCUs turn to? It's very hard to say. When it comes down to it, they desperately need the help of the NCAA to help "right the ship" and to demand NCAA academic policy from the Committee on Academics which not negatively impact them compared to their peers.

Limitations

First and foremost, the greatest limitation to this study was the strong presence of multicollinearity, which made running a full model not possible. In addition to the presence of multicollinearity within the sample, there were several additional limitations to consider with this study. The first major limitation was the sample was limited to public colleges and universities due to inaccessibility of expenditures per-student-athlete data in the sample for the private institutions. For instance, Howard University is an HBCU in the MEAC conference. Howard is a private university. Though information on Howard was available in IPEDS and the NCAA APR database, it was not readily available for expenditures per student-athlete in the Knight

Commission database. This missing information of expenditures per student-athlete was crucial to the study as it served as the means for validating whether or not an institution was to be included in the study, in addition to serving as a predictive variable. The sample included all public HBCUs who sponsor football regardless of spending. This certainly limited the overall scope of the study as many private HBCU and non-HBCU institutions have been recipients of penalties during the timeframe of the focus of this study who do not sponsor football. The lack of access to expenditures data for private institutions served as a significant limitation for this study.

Related to institution inclusion in the study, in order to keep comparisons between the two groups as similar as possible, I made the decision to only include colleges and universities who sponsor Division I football in the NCAA FCS classification. In the HBCU group, the overwhelming majority of institutions did sponsor football, with the exception of University of Maryland Eastern Shore and Coppin State University. As a result, it was necessary for all schools included to sponsor football as a means of providing parity in the sample. This meant that many "basketball only" institutions were omitted from the sample who would have been eligible based on qualifying expenditures per student-athlete calculated through the Knight Commission's Athletic and Academic Spending Database for NCAA Division I.

Related to the selection of eligible participant institutions for the study, comes another issue with the sample, which is that I could not be fully confident in knowing that the comparison group was fully inclusive of LRI institutions. Though I do have confidence that many of the institutions in the comparison group are in fact LRI classification, I made an educated assessment based on the similarity of spending patterns to those of the control group. As mentioned previously, though a college or university may have earned an NCAA AASP

grant, it does not necessarily mean that said institution was necessarily limited resource. Earning this grant meant that the institution was *either* limited resource *or* a member of a conference where 60% or more of the membership *was* limited resource. It should be noted that conferences tend to align with peer-like institutions, which usually resemble one another when it comes to resource levels. Spending was the best means of showing parity within the model, and it was the assumption that I was most comfortable making in categorizing these institutions into a "similarly resourced peer" or limited resource category.

This study only truly evaluates the recent impact of the APR metric, as it has been in existence for more than ten years now. The data was collected and averaged over five-year periods for each of the variables in the study between the 2010-2011 and 2014-2015 academic years. This study does not evaluate the metric during the first six years of the study, and it also leaves out the most recent two years of the study. Despite omitting these years, it does give a current account of the impact of the APR program. The two most recent years of data, 2015-2016 and 2016-2017, reflected a similar penalty distribution than what was reflected in the data for the scope of this study (Hosick, 2017; Hosick, 2018a). What this does provide is a means for sharing outcomes which will have utility in current time and recommendations for the APP which can be implemented to assist institutions which may be currently struggling with navigating the rigors of supporting resource heavy athletic programs.

A further limitation is that I was not able to include data administrative turnover, contest schedule, and expenditures on academic support which Paskus (2012) identified as potential predictors of academic sanctions. Though this information would be valuable, it either cannot be quantified, or it is not publicly available data. Understanding how these variables interact with penalty distribution would surely paint a more complete picture of the problem and give more

depth to understanding what could be done to support institutions with significant structural deficiencies.

Implications for Practice

The most glaring recommendation that I can make in response to the results of this study is for the NCAA to reevaluate the structure of the APR metric. Though the NCAA does implement filters for HBCU and LRI institutions, it does not appear to be treating the cause of the issue, but rather the symptom. The cause here is that at the very core of the HBCU mission is a steadfast commitment to providing access for poorer Black Americans to a quality and empowering education that they otherwise may not be privy to. One major way that the NCAA can do this is by establishing a commitment to supporting the development of high quality academic support programs for institutions which need it the most, especially in the area of staffing. This is the area in most desperate need of attention for HCBUs. This would include an agreement to support the funding of academic support units of colleges and universities who fall into LRI classification or schools who have a track record of struggling with graduating student-athletes and meeting APR benchmarks.

As the NCAA has overseen a system which is predicated on competition and rewarding athletic prowess, there needs to be a counterbalance to maintain healthy parity and consistency with its core mission and values. This needs to come in the form of substantial intervention to protect the pathway to graduation and reputation of colleges and universities who are providing opportunities for men and women to make meaningful change to their life trajectory through earning a college degree. This could look like the endowing of full-time positions for additional academic counselors, learning specialists, compliance officers, and student-development specialists. The NCAA could also contribute to sponsoring need-based grants for students at

struggling institutions to support students in the neediest situations. The NCAA could also drop the five-year metric and adopt the Federal six-year graduation metric for evaluating academic success.

These are just a few options which could provide a hand up to those in greatest need. This would by no means level the playing field, but it would be a means of social accountability for membership colleges and universities.

Suggestions for Future Research

As this is the first major study which links predictive factors to the NCAA APR metric, there is significant room for future research. Based on my findings, I am very curious to evaluate other potential predictive variables which were not included in this study, such as spending on academic support, administrative turnover, and contest schedule. I would strongly suggest that the NCAA make academic support expenditures a required publicly available data release by membership institutions, so the impact of spending on academic support can be analyzed and that information be used to inform future policy. There is great value in also understanding how the ratio of academic support professionals and the expertise of said individuals impacts student-athlete graduation achievement.

As this study only truly measured the relationship between a single penalty (whether a school was penalized *once* during the five-year span), there is a great need to evaluate the relationship when accounting for schools with multiple penalties such as Southern University or Mississippi Valley State University, who each earned multiple penalties during this time period. This would help understand the magnitude of the relationship and would most certainly inform policy in broader context.

Lastly, I would suggest a substantial qualitative updated study to identify academic support professionals, student-athletes, athletic directors, and presidents of LRI and HBCU institutions be conducted to analyze their perception of the current state of academic support at their institution and how it can be improved. This would reflect the initial studies by Christy, et al. (2008) as well as Kirkpatrick (2012). Improved is interpreted as not solely meeting APR requirements, but to provide student-athletes a quality educational experience which supports personal growth and academic achievement.

Conclusion

The findings from this study provide a sobering reality of the current state of intercollegiate athletics under the watch of the NCAA. As the intercollegiate landscape remains an open market of sorts, the disparity among schools has played second fiddle to the health and wellbeing of the schools which need support the most. As college athletics is a multi-billion dollar industry, and only stands to continue to grow, the NCAA cannot in good conscience prioritize winning and revenue generation over the health of its member institutions. Should this trend continue, I posit that we will continue to see the erosion of the HBCU. Intervening measures, if taken now, could help to close the widening gap between the haves and the have nots. Amending the APR to provide for such parity is the first step in making empowering change for the schools in this study who need it most. If the NCAA is able to devote a healthy effort to making this a priority, they can make sure that the HBCU continues to be a meaningful place for many to be student-athletes for generations to come.

On May 23, 2018, the NCAA released its annual APR press release (Hosick, 2018a). This year, the headline announced “Academic gains continue among DI student-athletes” with a subheading that said “Academic Progress Rate increases 2 points, HBCUs up 4”. Hosick (2018a)

quotes current NCAA president Mark Emmert on the way in which administrators, coaches, and students made "academic achievement and graduation top focus areas" (para 4). Emmert lauded the program for the positive culture shift it has created over the past 14 years and the historic 34-point gain in single-year APR scores for HBCUs (to 962) over the past five years, while non-HBCUs have gained five points (to 984). The difference in single year scores remains a substantial 22 points. The most impressive feature of the article was perhaps the 16,000 students who have returned during the 14 years to earn their degrees and "APR points for their prior teams" (Hosick, 2018a, para 7).

Of the 12 colleges and universities penalized as a result of the 2016-2017 academic year, only two schools, Wright State University and Gardner-Webb University, are non-HBCUs (Hosick, 2018b). It's hard to tell what *should* be the focal point of these releases. To the 16,000 students who have returned to earn their degrees, they truly have put education at the forefront of their current life status. It's hard to ignore that the trends of HBCUs being penalized disproportionately still lingers. Though Mark Emmert is not wrong, the culture is changing, is it changing for the better? For the HBCU, the last 10 years have contributed to an overall tarnished image as a result of the APR metric. Should the APR be lauded for its success? Only time will tell.

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